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UNIVERSITY OF ALBERTA

DEPRIVATION AND DISCONTENT: AGE DIFFERENCES IN WELL-BEING

BY

Margaret J. Penning

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY

DEPARTMENT OF SOCIOLOGY

Edmonton, Alberta
Spring 1993

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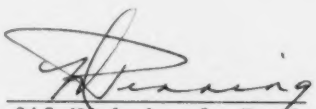

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FACULTY OF GRADUATE STUDIES AND RESEARCH

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November 20, 1992

to my father,

Bastiaan Penning

ABSTRACT

The correspondence between people's objective circumstances and their subjective feelings about them has long been a major focus of sociological investigation. This study addresses this issue, focusing on paradoxical findings reported between objective and subjective indicators of well-being in association with age. Analyses assess whether positive relationships between age and indicators of subjective well-being reflect differences in how those in different age groups respond to their objective situations; and the impact of perceptual factors (perceptions of attainment, relative deprivation, distributive justice and control) on these relationships.

Data are drawn from three national surveys carried out by the Institute for Behavioural Research, York University. The results of cohort-based regression analyses provide no evidence that older adults assess their health or overall life situations more positively than younger adults given similar levels of objective well-being. It is only in terms of economic well-being that older adults are found to have lower objective but higher subjective well-being when compared with other age groups. As well, no evidence of interaction between age and objective well-being is found.

The findings counter the view that age-related disparities exist in relationships between objective and subjective well-being, challenging some long-standing assumptions about the relationship between age and well-being. Past studies, based on aggregate data, that postulated discrepancies between age and objective and subjective well-being, suffered both methodological and interpretive flaws. In particular, the

view of older adults as less responsive to objective conditions appears to reflect an "ecological fallacy" with differences in the responsiveness of individuals of different ages to objective conditions (erroneously) inferred on the basis of differences observed among age groups. Older adults respond in the same way as those in other age groups to objective conditions. Their greater subjective well-being, where evident, reflects differences in perceptions (of distributive justice and attainment relative to aspirations and expectations for the future).

The findings have implications for understanding the meaning of deprivation in the lives of elders, suggesting a need to attend to the complexities underlying relationships among age, objective and subjective well-being.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to each member of my thesis committee. Particular thanks are extended to my supervisor, Dr. Sharon McIrvin Abu-Laban. Her theoretical insights and personal sensitivity were particularly appreciated as was her assistance with all aspects of the research. I am also grateful to Dr. John Gartrell for his enthusiasm, constructive criticism, and assistance with the analyses. Other committee members, Dr. Herb Northcott, Dr. Charles Hobart, and Dr. Alan Dobbs also made important contributions as did the external examiner, Dr. Victor Marshall from the University of Toronto.

Throughout my years as a graduate student, I have had the extreme good fortune to know and to work with Dr. Neena Chappell, formerly Director of the Centre on Aging at the University of Manitoba, and currently Director of the Centre on Aging at the University of Victoria. Her commitment to the pursuit of excellence as well as her enthusiasm and energy are matched by few. They serve both to inspire and challenge.

Family members and friends have been significant sources of support and encouragement. None have been more constant than my husband, David Clouston. My sons, Sean and Ryan, have also been important. For their joy and unreserved affection, I am truly grateful.

Finally, I would like to acknowledge the various sources of financial support provided to me while a doctoral student at the University of Alberta. These included the Social Sciences and Humanities Research Council of Canada (Doctoral Fellowship), the Alberta Heritage Scholarship Fund (Ralph E. Steinhauer Award of Distinction), and the University of Alberta (John Russell Love Memorial Scholarship).

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Chapter I

NATURE OF THE INVESTIGATION

1. Introduction

The process of aging within industrial capitalist societies appears, in terms of C. Wright Mills (1959:8), to have emerged as a source of "public issue" without necessarily being considered a source of "private troubles". Just why this is the case is not yet known. However, research findings consistently point to discrepancies between the objective conditions of older adults and their subjective assessments of them, particularly when compared with those in younger age groups. Older adults, it appears, assess their situations more positively than those in other age groups. To the extent they also have worse objective situations, it would appear they also assess their situations more positively than seems warranted on the basis of knowledge regarding their objective life situations.

The relationship between people's objective circumstances and their subjective feelings about them represents a now classic problem within sociological and social gerontological literature. This dissertation empirically examines this issue. In particular, it focuses on whether age-related differences in subjective well-being reflect differences in how those in different age groups respond to their objective life situations; thus, whether age and objective conditions (specifically income and health) interact to influence subjective well-being. Further,

it assesses the relative adequacy of two different explanatory models that have been proposed to account for age-related disparities between objective and subjective well-being. The first attributes age-related disparities in relationships between objective and subjective well-being to the effectiveness of strategies used by older adults to cope with (and accommodate to) their objective situations. The second attributes such disparities to the false consciousness of older adults and their resulting inability to accurately perceive their own objective situations. Data for the analyses are drawn from three national sample surveys conducted by the Survey Research Centre, Institute for Behavioural Research at York University, Toronto.

2. Background in Theory and Research

a. Age, Deprivation and Contentment: Evidence for an Anomaly

The disadvantages associated with old age and the inequalities that attend location within particular age groups are recurrent themes in the aging literature. Myles (1980), for example, characterizes the aging process as a 'career trajectory of ever-increasing dependency' and views the aged as members of a 'negatively privileged status group'. Similarly, Dowd (1980) focuses on the aged as victims of a double bind. He notes that not only does access to resources generally decline with age but also, advanced age serves as a basis for status devaluation.

The stereotypical view that depicts the aged as impoverished, dependent, socially isolated and physically disabled has come under recent criticism as being inappropriate to describe the majority of older people

(see Connidis, 1987; Harris and Cole, 1980). Nevertheless, it is generally acknowledged that, in relative terms, the elderly are disadvantaged (Matthews, 1979); they are more likely than those in most other age groups to be poor, to be widowed, to be vulnerable to the loss of meaningful social roles and support, to live in adequate housing or in institutions, and to suffer from one or more forms of chronic illness (George, 1980; Ward, 1984). In part, this reflects the changes associated with age-related differences in biological capacities. More often, however, it is attributed to differences in the social and economic opportunities and rewards available to members of these age groups (see Foner, 1976; Matthews, 1979).

According to Riley, Johnson and Foner (1972:430), old age represents the life stage in which "net rewards are lowest". Empirical evidence supports this view and indicates that old age is often associated with the experience of poverty in modern capitalist societies (Chappell and Taylor, 1981). In Canada, 20 percent of elderly individuals - 9.5 percent of elderly families and 42.7 percent of those who are unattached - have incomes below the poverty line established by the National Council of Welfare (Canada, 1988). Over 50 percent have income levels sufficiently low to receive supplementary benefits provided through the Guaranteed Income Supplement (GIS - see Chappell, 1987; Messinger and Powell, 1987). Similar differentials have been reported for age-related patterns of net worth (Foner, 1979; George, 1980).

In terms of the distribution of power and prestige, similar findings are also reported. The old have been found to be under-represented among those who hold important positions in economic,

political, and religious institutions (Dowd, 1980; Foner, 1976:1979; Lammers and Nyomarkay, 1980). Their ability to sustain the organizational involvements, informal associations, and style of life that contributed to define their status in middle age is substantially reduced (Dowd, 1980; Stub, 1982). As well, evidence suggests they are susceptible to independent status loss on the basis of age (Baker, 1985; Rosow, 1973; Hendricks and Hendricks, 1977; Matthews, 1979; Ward, 1984).

Based on findings of this nature, a number of investigators regard age as a dimension of structured social inequality (Bengtson, Kasschau and Ragan, 1977; Bengtson, 1979; Dowd, 1980; Foner, 1976: 1979; Riley, 1971). Proponents of a stratification approach note therefore that age, like class, governs access to society's social, economic, and political resources. The aged, like the poor and working classes in modern society, are said to share a parallel position within the social structure.

Given the objective disadvantages that tend to be associated with old age and with the location of the aged within the social structure, one would expect negative consequences to be observed on the subjective (psychological) level. This is particularly so given the extensive research findings that indicate the primary importance of health, economic security, and social participation variables for predicting subjective assessments of well-being (Bultena and Powers, 1976; also see Larson, 1978 for a review of this research).

Sociologists have long attributed differences in life styles, world views, perceptions of self and of others to the objective exigencies characterizing individuals' life situations and their location within the social structure. In gerontology, proponents of role theory (see Blau,

1973:19), socialization theory (Rosow, 1974), and others (see, for example, Kuypers and Bengtson, 1973) note that devaluation and exclusion from active participation in society serve to undermine the structural bases that contribute to define individual identity and feelings of self-worth. Similarly, those who advocate a stratification approach point to the negative implications of inequality for subjective well-being irrespective of its source. As noted by Foner (1979:225), for example, "a stratification approach ... implies that low or high position in the ... (stratification) hierarchies ought to have a similar influence over individuals' ways of thinking and acting". Dowd (1980:22) echoes Foner's view. He notes that since both age strata and social classes are defined by their accumulation of valued resources and by their access to the means for acquiring them, membership in either should facilitate similar styles of life and world views.

Ironically, however, there is little empirical support for the view that older individuals respond to their situations more negatively than do those who are middle-aged. As well, there is little evidence to suggest similar levels of subjective well-being among older adults and those who are disadvantaged by virtue of their socioeconomic status or class. An extensive body of research findings documents the personal 'injuries' associated with the lack of economic resources. Lower levels of satisfaction (with life in general as well as with specific domains of life), more negative feelings of self-worth, higher levels of psychological distress as well as feelings of alienation and anomie are rather consistently reported among those with fewer resources or with restricted means of acquiring them (see, for example, Atkinson, 1980;

Campbell, Converse and Rodgers, 1976; Cockerham, 1978; Dohrenwend, 1975; Foner, 1979; Gurin and Gurin, 1976; Rosenberg and Pearlin, 1978; Strumpel, 1976).

Among the elderly, similar differentials are reported. Older individuals from lower social classes and with lower levels of education and income are, in general, reported to have lower levels of life satisfaction, to be more likely to identify themselves as old, to score higher on feelings of anomie, political discontentment, and relative deprivation, and to be more likely to perceive that they have relatively little ability to control the events of their own lives than are those not similarly disadvantaged (see Bengtson, Kasschau and Ragan, 1977; Baum and Boxley, 1983; Bultena and Powers, 1978; Chatfield, 1977; Cicirelli, 1980; Cox, 1980; Edwards and Klemmack, 1973; Hunter et al., 1980; Hurst and Guldin, 1981; Larson, 1978; Leonard, 1977; Liang and Fairchild, 1979; Markides and Boldt, 1983; Miller, Gurin and Gurin, 1980).

However, in contrast with findings indicating that those disadvantaged by virtue of low 'achieved' status also tend to evaluate and respond to their life situations more negatively than do those who are not similarly disadvantaged, research on age variations often suggests the reverse. Despite generally greater objective deprivation and lower social status, research findings point to the conclusion that older individuals tend toward positive evaluations of many aspects of their life situations. Often these assessments are found to be more positive than those of middle-aged or younger individuals.

Comparative studies that focus on age in relation to such global constructs as life satisfaction, morale, and perceived well-being tend to

illustrate this trend. Some research suggests similar levels of satisfaction and well-being among individuals in different age groups (Andrews and Withey, 1976; Dowd and Bengtson, 1978; Edwards and Klemmack, 1973). However, more often, cross-sectional analyses indicate somewhat higher levels of subjective well-being among older individuals (see Campbell, Converse and Rodgers, 1976; Atkinson, 1980; Clemente and Sauer, 1976; Tornstam, 1975; Campbell, 1981; Fernandez and Kulik, 1981; Herzog and Rodgers, 1981; Janson and Mueller, 1983; Northcott, 1982; Spreitzer and Snyder, 1974; Taylor and Ford, 1983; Witt et al., 1980: 1981; Wolinsky, 1989).

In general, the relationships reported between age and measures of happiness, morale and life satisfaction tend to be rather modest in magnitude (Herzog and Rodgers, 1981). However, some evidence suggests that age variations in perceptions of well-being may be curvilinear in nature, with the lowest levels being evident among those in middle age (see Campbell, Converse and Rodgers, 1976; Mastekaasa and Moum, 1984). As well, age-related deficits in levels of health, economic security, and other factors appear to suppress a more substantial association (Herzog and Rodgers, 1981; Janson and Mueller, 1983; Witt et al, 1980:1981). According to the findings reported by Witt et al (1981), once differences in perceptions of health and/or social isolation are controlled for, age alone accounts for 7.6 to 17.0 percent of the variance evident in levels of happiness reported by individuals living in single person households in the U.S. (from 1972 through 1977). On the basis of their findings, Janson and Mueller (1983:365) conclude that old age does not entail costs for subjective well-being. Rather, it is said to be more appropriately

viewed as constituting a sort of benefit. This appears in direct contrast with general expectations evident within the literature.

The tendency for older individuals to respond to their situations more positively than the middle-aged is not limited to global assessments of well-being, happiness, or life satisfaction. According to findings reported by Cook and Kramek (1986), although older adults are more likely than younger adults to have low incomes, they also report fewer hardships as a result. In research reported by Chappell and Taylor (1981), fully 76 percent of the elderly respondents surveyed indicated that their incomes were either adequate or more than adequate in meeting their needs. Similarly, Liang and Fairchild's (1979) secondary analyses of data from six national sample surveys conducted in the U.S. (from 1972 through 1977) revealed that from 59 to 69 percent of older respondents assessed their incomes as being either average or above average when compared with American families in general. The vast majority (from 80 to 85 percent) also indicated they were either 'more or less' or 'pretty well' satisfied with their current financial situations.

Not only do absolute levels of satisfaction with income and overall financial situations tend to be rather high among older individuals, but research findings consistently indicate satisfaction with levels of income, financial situation, savings, and standard of living tends to be higher among older individuals when compared with those middle-aged or younger (Atkinson, 1980; Borgatta and Foss, 1979; Campbell, Converse and Rodgers, 1976; Campbell, 1981; Fletcher and Lorenz, 1985; Herzog and Rodgers, 1981; Lacy and Hendricks, 1980; Medley, 1980; Northcott, 1982; Strumpel, 1976). Age-related deficits observed in

relation to such factors as income, education, and health status appear, once again, to suppress an even more positive relationship (Herzog and Rodgers, 1981; Strumpel, 1976).

Research that examines satisfaction with environmental variables such as housing, neighbourhood, and the community as a whole tends to reveal similar results (O'Bryant, 1982). Although research findings indicate that a significant proportion of older people live in substandard housing or in housing in need of major repairs (see Carp, 1975; O'Bryant, 1982; Rabushka and Jacobs, 1980; Winiecke, 1973), very few appear to regard their housing as problematic (Butler and Lewis, 1973). As noted by O'Bryant and Wolf (1983), virtually all research that examines housing satisfaction reveals older people to be highly satisfied. Yet objective assessments often indicate their housing to be less than adequate. Typically, over three quarters of the older respondents included within social surveys are reported to indicate that they are completely or almost completely satisfied with their housing (Golant, 1984), to rate their housing as either good or excellent (Struyk and Soldo, 1980), and to assert that their homes 'fully' meet their own and their families' needs (Montgomery, Stubbs and Day, 1980).

Similar findings are reported with regard to perceptions of the neighbourhood and community. In research conducted by Golant (1984) of older residents of a largely middle class community, over one half of those surveyed indicated being 'completely satisfied' with their community as a place to live (55 percent) as well as with their own neighbourhoods (54 percent). Comparable figures are reported by Marans and Rodgers (1975) on the basis of American national survey data as well as by Cantor

(1975, cited in Carp, 1975) for elderly poor living in inner city, New York.

In contrast with the high degree of satisfaction typically reported by older individuals, it appears that younger respondents tend toward more negative appraisals. In contrast with the 56 percent of respondents aged 65 and over within Marans and Rodgers' (1975) study who indicated that they were completely satisfied with their community as a place to live, this was the case for only 20 percent of those aged 18 through 24, 30 percent of those aged 25 through 34, and 47 percent of those aged 45 through 64.

Standardized bivariate regression coefficients for the relationship between age and levels of satisfaction with housing and with the community reported by Herzog and Rodgers (1981) using thirteen national surveys conducted in the United States, range in magnitude from .12 to .26, indicating the likelihood of a moderately strong correlation once appropriate controls are established. That this is indeed the case is given some support by analyses conducted by Campbell, Converse and Rodgers (1976). Their findings indicate that when age (or a proxy measure of stage in the family life cycle) is included as a predictor of residential satisfaction along with personal characteristics and objective indicators referring to the quality of housing, community size, location, and so on, age emerges as a significant, positive determinant of subjective levels of well-being.

Evidence of a positive relationship between age and levels of satisfaction with work (see Campbell, Converse and Rodgers, 1976; Glenn and Weaver, 1982; Herzog and Rodgers, 1981; Kalleberg and Loscocco, 1983;

Lacy and Hendricks, 1980; Northcott, 1982; Quinn, Staines and McCullough, 1974; Sheppard and Herrick, 1972; Strumpel, 1976; Wright and Hamilton, 1978) lends additional support to claims concerning the apparent generalizeability of age-related gains in subjective well-being (Campbell, Converse and Rodgers, 1976; Herzog and Rodgers, 1981).

However, despite relative agreement regarding the positive nature of the relationship between age and job satisfaction, less consistent evidence is available to indicate whether it is linear in form. Herzog and Rodgers (1981) assert a positive and linear trend. In contrast, research reported by Janson and Martin (1982) and Kalleberg and Loscocco (1983) indicate a tendency toward increased job satisfaction until about forty years of age after which satisfaction decreases slightly (Janson and Martin, 1982) or levels off (Kalleberg and Loscocco, 1983) before increasing once again from the late fifties through to the end of the work cycle. According to the findings reported by Kalleberg and Loscocco (1983), age alone accounts for almost seven percent of the variance in job satisfaction; a relationship that is only slightly attenuated once various other demographic and job-related factors are included in the equation.

In general, more modest correlations tend to be reported in the interpersonal realm, including age-related patterns of satisfaction with familial and friendship relations (Campbell, Converse and Rodgers, 1976; Herzog and Rodgers, 1981). Nevertheless, a significant body of research attests to the existence of a positive, though curvilinear (U-shaped) association between age (and/or a proxy measure of family life cycle stage) and levels of satisfaction with the marital relationship. These findings suggest relatively high levels of satisfaction among younger

respondents and those in the initial, pre-child marital stage; levels that appear to decrease gradually and stabilize at their lowest level between forty and fifty years of age before increasing once again during late middle and old age (see Abu-Laban, 1980; Campbell, Converse and Rodgers, 1976; George, 1980; Gilford and Bengtson, 1979; Herzog and Rodgers, 1981; Lacy and Hendricks, 1980; Rollins and Feldman, 1970; Rollins and Cannon, 1974; Schram, 1979; Spanier, Lewis and Cole, 1975).

It would seem that the positive relationship between age and subjective assessments of well-being is, in fact, generalizeable beyond satisfaction with any one area of life in particular. Indeed, it is only in the area of health that older individuals are generally acknowledged to express lower assessments and less satisfaction (Campbell, Converse and Rodgers, 1976; Herzog and Rodgers, 1981; Northcott, 1982). Nevertheless, in absolute terms, these assessments remain positive (see Cockerham, Sharp and Wilcox, 1983; Ferraro, 1980; Fillenbaum, 1979; Myles, 1978; Shanas et al., 1968). Over eighty percent of those aged 65 and over in Canada and the United States have been reported to suffer from at least one chronic health problem (Health and Welfare Canada and Statistics Canada, 1981; Chappell, Strain and Blandford, 1985; U.S. Bureau of the Census, 1983). Yet the majority also report their health to be either good or excellent when asked for a subjective assessment. Wolinsky (1983) reports that of those aged 65 and over in the U.S. Health Interview Survey, 41.1 percent rated their health as good and 28.3 percent rated it as excellent. Similar figures are reported by Chappell (1983) using Canadian data.

Findings such as these suggest better subjective health ratings than would be expected on the basis of objective indicators. As well,

they point to the possibility of a positive relationship between age and subjective assessments of health once differences of objective health (as well as possible confounding factors such as gender, education, and marital status) are controlled for.

Contradictory findings are evident. Research conducted by Levkoff, Cleary and Wetle (1987) suggests that this is not the case and that the elderly actually evaluate their health status more negatively than the middle-aged. In contrast, evidence against this view is suggested on the basis of research reported by Cockerham, Sharp and Wilcox (1983). Using a probability sample of adults aged eighteen and over, these investigators asked respondents to rate their health relative to other individuals of the same age. Their findings revealed that whereas adult age groups under the age of sixty tended to yield similar assessments of health (with approximately 25 percent of those in each ten year cohort evaluating their health as much better than age peers; 25 percent rating their health as somewhat better than that of their age peers; and 40 percent rating their health as about the same as others of their own age), those in cohorts over the age of sixty gave more positive appraisals. Approximately forty percent of respondents aged 61 to 70, 71 to 80, and 81 and over evaluated their health as being much better than that of their age peers.

Based on their subsequent investigation of a path model in which age was included as a determinant of self-assessed health along with a measure of objective health status (i.e., the number of symptoms reported) and sociodemographic characteristics (including sex, education, income, race, and marital status), these authors report evidence to indicate both

direct and indirect effects of age on perceptions of health. A significant and positive direct effect of age on self-assessed health was confirmed. However, evidence was also found to indicate the presence of indirect negative effects through education and objective health status. The lower levels of education and increased prevalence of illness apparent among the older age groups served, according to these authors, to suppress the positive effects of age on self-assessed health by 31 percent.

Somewhat similar findings are reported by Stoller (1984). Based on analyses similar to those conducted by Cockerham, Sharp and Wilcox (1983), she reports findings revealing a direct positive impact of age (net of sex, education, living arrangements, social isolation, and medical and functional impairments) on comparative assessments of health. However, a similar impact was not found with regard to a noncomparative measure, leading to speculation that it is only in terms of age peers that older individuals express more positive assessments of health.

Analyses reported by Ferraro (1980) suggest that this is not the case and that age is positively correlated with more general assessments of health at least when it comes to those within the older age groups. For his sample of low income elderly individuals in the U.S., age was a significant and positive predictor of perceived health status after controlling for the effects of objective health (indicated by the number of illnesses reported and functional disability), sex and education. Similar findings are reported by Herzog, Rodgers and Woodworth (1982), Essex (1986) and Linn and Linn (1980). Finally, Rakowski and Cryan (1990) report findings indicating that although persons aged 80 and over were similar to those aged 55-64 and 65-79 in that higher levels of impairment

were associated with lower assessments of health, the relationships were found to be stronger among those in the younger age groups.

In sum, with relatively few exceptions, the findings reviewed above indicate that older individuals do maintain relatively high levels of subjective well-being. This is particularly so in terms of their reactions to such features of their life situations as their work, housing, economic conditions, and life as a whole. In each of these areas, older adults not only report positive well-being but also, appear to do so to an extent often greater than those who are middle-aged or younger.

Findings of this nature contradict expectations concerning how members of a deprived group, such as the elderly, ought to feel (Foner, 1979). The fact that such levels, in many cases, appear to be higher than those appropriate to younger (and, objectively more advantaged) age strata, suggests an anomaly that has yet to be resolved.

b. Accommodation and False Consciousness in Response to Negative Images: Competing Interpretations

A variety of explanations have been introduced, primarily on a post hoc basis, to account for recurrent, yet anomalous findings regarding the relationships among age, objective and subjective well-being. The following statement by Ward (1984:109) both attests to the wealth of speculation and points to the lack of knowledge available concerning such findings. He notes:

> It is not clear what to make of this. Optimistically, it may mean that older people are able to respond effectively to the

> demands and challenges of aging. It probably also reflects adjustments made over time as aspirations become more realistic, unhappy marriages are dissolved, and people find better jobs or better housing. It may mean that older people are more accepting of familiar situations, and less willing to admit their problems, or even that unhappy people die earlier than happy people.

One explanation for findings indicating a positive relationship between age and subjective assessments of well-being is that older individuals respond differently to features of their objective life situations than do those in other age groups. More specifically, older individuals are considered to be less responsive to their objective situational conditions (including health status, income, etc.) than are those in younger age groups (see, for example, Atkinson, Blishen and Murray, 1980; Rakowski and Cryan, 1990).

Differences in the responsiveness of those in different age groups to their objective situations are, in turn, attributed to differences in the perceptions that those in different age groups tend to have regarding their situations. However, less agreement tends to be evident regarding which standards or perceptual criteria are of major importance and how they ought to be conceptualized in terms of their impact on relationships between objective and subjective well-being.

The literature points to a number of standards that appear to hold promise for an understanding of the relationship. According to Campbell, Converse and Rodgers (1976:14), for example, individuals' assessments of their situations may reflect any one or a number of different criteria including:

> aspiration levels or the situations that a person hopes eventually to attain ...; expectation levels, or the situation he feels he is likely to attain in the fairly immediate

> future; equity levels; or what he thinks should be true of his situation if perfect justice prevails, given how much he invests in it relative to others; reference group levels, or what he believes to be true of the situation of others with whom he identifies...

Still others point to the added significance of such factors as perceptions regarding personal efficacy or control (Gurin and Gurin, 1976).

Based upon their use in the literature, however, these standards can be seen to reflect two distinct and competing interpretations regarding the nature of the disparities between objective and subjective well-being among the elderly. These interpretations, the standards upon which they are based, and the research evidence that bears on them are discussed below.

(i) Age and Accommodation

Proponents of an accommodation model attribute findings that elderly individuals maintain relatively high levels of subjective well-being despite often encountering poor objective conditions to the effectiveness of various strategies used for coming to terms with and thereby accommodating (resigning) themselves to their situations; strategies that make them less vulnerable to the potentially negative implications of poor objective conditions.

This position, while largely implicit, can be discerned in literature that asserts the importance of such factors as: (a) perceptions of attainment; and (b) perceptions of personal efficacy or control as

standards by which individuals assess their situations and consequently, derive feelings of subjective well-being.

Perceptions of Attainment

Perceptions of attainment represent the disparities perceived by individuals between their own current situations and those they either expect or aspire to have at some point in the future. According to Otto and Featherman (1975), feelings of alienation, dissatisfaction, and discontentment are likely to result in instances where individuals perceive a negative discrepancy between their real and ideal situations. Along similar lines, Campbell, Converse and Rodgers (1976) note that differences between individuals' actual attainments (as represented by their perceptions of their current situations) and those they eventually hope or expect to attain, may have an impact on how they feel about their current situations. Specifically, it is suggested that those whose aspirations and/or expectations are considerably greater than their perceived actual attainments will be less satisfied with their situations than will those who perceive their circumstances to either meet or exceed their real or ideal expectations.

To the extent that aspirations and expectations set standards against which current achievements are assessed, differences in the levels of the standard being applied may result in situations where those in equivalent objective circumstances nevertheless assess their situations differently while those in dissimilar circumstances nevertheless yield similar assessments. As noted by Campbell (1972:444):

> in the sense that aspirations are fulfilled, they are equally fulfilled. The satisfactions are equal in the sense that two bottles may be equally full even though one holds much more than the other.

However, despite similar levels, the particular types of satisfaction that result are said to differ. According to Strumpel (1976:186), "satisfaction may reflect both goal attainment and acceptance of its impossibility, i.e., accommodation to an immutable reality" and the variance associated with each of these components is confounded in general indicators of well-being. Similarly, Atkinson (1980) and Campbell, Converse and Rodgers (1976) point to the need to differentiate between the satisfaction associated with accomplishment (success) and that associated with accommodation or resignation. While the first reflects a narrowing of the gap between one's circumstances and one's goals as a consequence of felt improvements in circumstances, the second results from a narrowing of the gap through the downward adjustment of goals (aspirations, expectations) to a level perceived consistent with actual circumstances.

It is this latter type of satisfaction that is said to be revealed in the prevalence of positive assessments of well-being among the elderly and that therefore accounts for observed discrepancies between their objective conditions and subjective responses to them. According to Foner (1979) and Campbell, Converse and Rodgers (1976), for example, older individuals tend to have reduced levels of aspiration and expectation compared to those in other age groups. This is so because, among the elderly, aspirations and expectations are "progressively hedged back to fit the realities of the situation" (Campbell, Converse and Rodgers, 1976:168). Atkinson, Blishen and Murray (1980) speculate that older

persons may respond differently to symptoms of illness because they have learned to expect, and therefore, to be satisfied with objectively lower levels of physical capabilities. By reducing their levels of aspiration and expectation, older individuals are said to be able to minimize the gap between their hopes and expectations on the one hand and evaluated reality on the other.

The reduction of aspirations and expectations is said to signify accommodation on the part of older individuals to their situations (Campbell, Converse and Rodgers, 1976). Fletcher and Lorenz (1985) note therefore that age is a proxy not only for differences of access to objective resources and opportunities but also, for tendencies toward accommodation. It is a response interpreted by some as a reflection of realism and by others, as resignation. It is also a response linked by most to structural constraints; to the lack of access to resources and opportunities for improving one's situation.

It has been suggested that over time, elderly individuals learn to be humble and to appreciate what little they possess (O'Bryant, 1982; Montgomery et al., 1980). According to Campbell, Converse and Rodgers (1976), accommodation on the part of older individuals represents a form of resignation or passive acceptance of their situations brought on by the recognized lack of access to means for improving the situation.

In contrast, Strumpel (1976:26) considers age to be a proxy for realism. In his view, "(t)he options of the young become the constraints of the old and... are perceived that way". Over time, goals that can no longer be attained are either modified or abandoned altogether. Similarly, Bultena and Powers (1978) regard accommodation as a form of stoicism among

those confronted with adverse social conditions. In their view, it reflects an important cultural orientation or value that holds that one bravely accept circumstances over which one has little control and therefore, make do.

Research in this area is limited. However, evidence is available suggesting that the elderly may, in fact, have lower levels of aspiration and expectation than other age groups. For example, Tornstam (1975) reports findings indicating a negative relationship between age and aspirations regarding health. Similarly, Rodgers and Herzog (1983) report the average incomes older individuals expect and aspire to have to be lower than those of younger individuals. Discrepancies between the incomes they currently have and those they expected and aspired to have in the future were also found to be smaller among older individuals when compared with those younger. Finally, according to findings reported by Campbell, Converse and Rodgers (1976), negative correlations are also evident between age and respondents' indications of the best houses and the best neighbourhoods they could ever hope to have. Absolute differences between aspirations or expectations in this area and respondents' ratings of their own current situations also emerged as being smaller among older than younger age groups.

Others report findings indicating the importance of perceptions of attainment for determining subjective assessments of well-being. For example, findings reported by Michalos (1986) reveal that the perceived discrepancies between one's current life situation and one's aspirations have a significant impact on the life satisfaction of the elderly with those perceiving less of a gap being more satisfied. Yet, there is no

evidence to indicate whether or not perceptions of attainment considered relative to aspirations or expectations account for age-related disparities between objective and subjective well-being.

Perceptions of Control

Those who emphasize the importance of perceptions of attainment for determining subjective assessments of well-being regard these perceptions as being influenced by the ability or inability of individuals to exercise control over and thereby, to alter their situations. However, others assert that perceptions of personal efficacy or control may, by themselves, serve to generate positive assessments of well-being.

An extensive body of literature documents positive relationships between measures of personal competence, efficacy, or internal control orientations and various indicators of adjustment or psychological well-being (see, for example, Bengtson, Manuel and Burton, 1981; Carp and Carp, 1981; Gurin and Gurin, 1976; Kivett, Watson and Busch, 1977; Kuypers, 1971; Molinari and Niederehe, 1984-85; Palmore and Luikart, 1972; Langer and Rodin, 1976; Seeman and Seeman, 1983; Wolk and Kurtz, 1975). According to findings of this nature, an internal control orientation (one in which individuals consider themselves to be capable of exercising a measure of control over their life situations) is conducive to positive feelings of well-being while an external orientation (one in which control is located in external forces such as fate, chance, or powerful others) often leads to negative feelings of well-being or dissatisfaction.

However, Gurin and Gurin (1976) as well as others (see Gecas and

Schwalbe, 1983; Lazarus and Olbrich, 1983; Schultz and Hanusa, 1980; Strumpel, 1976; Yuchtmann (Yaar), 1976) note that this is not necessarily the case. According to these authors, predictions concerning relationships between perceptions of personal efficacy or control and satisfaction are complicated by the fact that both internal and external control orientations may, in certain circumstances, be associated with positive as well as negative feelings of subjective well-being.

Gurin and Gurin (1976:155) draw attention to the role of objective conditions for defining this relationship and suggest the need to differentiate between the effects of internal and external control orientations on individuals' attitudes and behaviours depending upon the degree of external constraint apparent within the environment. In their view, expectations concerning personal efficacy must be relatively low when the environment itself is highly constraining. Thus they suggest the importance of perceptions of internal control for predicting individual attitudes and behaviour is likely to be reduced in those conditions that offer few opportunities for individuals to display feelings of efficacy.

In contrast, Carp and Carp (1981) assert that the prevalence of positive assessments of well-being among older individuals may reflect their greater perceived lack of ability to exert control over the realities of life. In their view, this reflects the situational deprivation to which older people tend to be particularly vulnerable. They note that within extremely deprived situations, a perception of powerlessness to improve one's conditions may be conducive rather than detrimental to well-being.

Varghese and Medinger (1979) echo this view. They suggest that the prominence of positive assessments of well-being among older individuals may reflect their greater perceived lack of ability to exert control over the realities of life. Defining fatalism as "a generalized expectancy for external control" (Varghese and Medinger, 1979:104), these authors assert that older individuals often lack the resources necessary in order to perceive a sense of control over their situations. They suggest that, as a result, such responses may be conducive to psychological well-being in conditions characterized by high situational constraint.

According to these authors, findings that indicate a positive relationship between externality and maladjustment are appropriate to situations that do not severely restrict the ability of individuals to exercise such control. Therefore, in commenting on the situations of the elderly in certain ethnic minorities, they note:

> The low status individual who assumes complete personal responsibility for his social status becomes vulnerable to depression. A belief in the power of chance factors and other forces outside one's control provides a defensive rationale for... present status ... A disbelief in one's personal competence leads to lowered expectations, which in turn offers some protection... Fatalism may represent a realistic response to the situational deficits faced by the minority elderly...(Varghese and Medinger, 1979:110).

According to Riley, Johnson and Foner (1972), older individuals in general tend to perceive themselves as having less mastery or control over their life situations, to consider the world as being less amenable to change, and to place a greater emphasis on the responsibility of the individual for his/her own destiny than do those who are middle-aged or younger. As a result, they suggest that older individuals may be more

likely to seek palliative rather than ameliorative treatment in dealing with their life situations.

However, research findings cast doubt on assumptions concerning the generalizeability of external control orientations among the elderly. Rather, findings that fail to indicate differences in absolute levels of control perceived among individuals within middle and older age groups prevail (see Duke, Shaheen and Nowicki, 1974; Campbell, Converse and Rodgers, 1976; Fawcett, Stone and Zepelin, 1980; Nehrke, Hulicka and Morganti, 1980; Kuypers, 1972; Reinsch, 1979 cited in Levinson, 1981; Ryckmann and Malikioski, 1975). This suggests that should age-related disparities evident between objective and subjective well-being be a consequence of perceptions of powerlessness or lack of personal efficacy or control on the part of older individuals, this likely reflects differences in the impact of control orientations among those in different age groups (as suggested by Gurin and Gurin, 1976) or interactions between perceptions of control and objective situational conditions (as suggested by Carp and Carp, 1981 as well as Varghese and Medinger, 1979).

To date, research that addresses these possibilities is suggestive rather than definitive. However, although contradictory findings are evident (see Fawcett, Stone and Zepelin, 1980), a number of studies do report findings that support assertions concerning the positive contributions of external control orientations to subjective assessments of well-being among older individuals located within relatively constraining objective conditions. In particular, findings reported in a number of studies indicate that external rather than internal control orientations tend to be conducive to subjective well-being among older

institutional residents (see Felton and Kahana, 1974; Wolk, 1976; Wolk and Telleen, 1976; Nehrke, Hulicka, and Morganti, 1980). Similarly, elderly individuals who are used to exercising a fair amount of control are reported to do less well in such settings than are those who are used to exercising less control (see Schultz and Alderman, 1973; Sherwood et al., 1974).

Support is also cited on the basis of experimental research conducted by Schultz and Hanusa (1980). They examined the view that coping is a function of both "efficacy expectations" (the perception that one is able to perform the behaviours required for specific outcomes) and "outcome expectations" (the perception that the environment will be responsive to one's efforts; cf. Bandura, 1977). Subjects included within their sample of long-term care facility residents were assigned to experimental and control groups that received different information regarding their personal efficacy (to perform various cognitive, motor, and social skills tasks) and ability to control their own outcomes (i.e., gaining a financial reward as a result of their performance).

Surprisingly, elderly subjects exposed to both interventions were found to be worse off in terms of health and psychological well-being than were those exposed to either one of the two interventions alone. Yet, in a replication conducted in a college setting, the combined effects of both interventions were found to be more positive than the impact of either intervention alone. According to the investigators, the difference in the findings reflects the influence of contextual factors. In particular, they note the importance of differences in the ability of the two settings to accommodate different levels of competence. Unlike college settings,

opportunities for exercising individual competence in institutional settings are often restricted. Residents therefore have little choice but to make do with whatever opportunities are available.

Research that focuses on other types of objective or environmental constraints (e.g., lack of access to social and economic resources, etc.) is lacking. However, in research conducted by West and Simons (1983 - also see Simons and West, 1984-85) focusing on the impact of perceptions of self-efficacy on relationships between life events and illness among the elderly, both main effects of perceived self-efficacy on illness and interaction effects involving perceived self-efficacy and life events were found. The interactions between self-efficacy and life events (including such things as retirement, physical impairment, moving to a care facility) indicated that among those elderly who experienced more life changes, perceptions of personal efficacy were detrimental and increased rather than decreased the likelihood of illness. According to these authors, this is likely due to the uncontrollable and unavoidable nature of the life changes typically associated with old age. They note that under such conditions, perceptions of high self-efficacy may be unrealistic, leading to frustration when attempts are made to modify or otherwise control situations over which little control is realistically possible.

(ii) Age and False Consciousness

The accommodation argument implies that elderly individuals are no less aware of the objective features of their life situations than are those in other age groups. Rather, inconsistencies evident between

objective and subjective well-being among the elderly reflect coping or accommodation on the part of elderly individuals to their situations. Accommodation, in turn, is attributed to the lack of opportunities available to the elderly to alter features of their objective life situations.

In contrast with this position, others assert that elderly individuals do not maintain accurate perceptions of their objective circumstances. Rather, the perceptions they tend to have regarding their own situations and consequently, also their subjective responses to them, are said to be distorted. This, in turn, is attributed to the inaccurate or faulty appraisals made by the elderly with regard to: (a) their perceptions of relative deprivation; and (b) their perceptions of equity or distributive justice.

Perceptions of Relative Deprivation

There is a lack of consensus regarding the definition and scope of the concept of relative deprivation (Crosby, 1979). However, as originally developed, it draws attention to the significance of others and particularly, of others within one's reference group(s) (see Liang and Fairchild, 1979; Merton and Rossi, 1968; Runciman, 1966; Stouffer et al., 1949) as a standard against which individuals define or evaluate aspects of their own life situations.

Specifically, use of the concept suggests that perceptions of disparity between one's own current situation and the situation of others with whom one compares oneself will have a bearing on one's feelings of

satisfaction or well-being. It suggests that those who perceive their circumstances as being better than those of others are more likely to view their situations positively and consequently, to be more satisfied with their lot than are those who perceive it in the reverse. Theoretically, either situation is possible irrespective of the absolute levels of well-being evident with regard to their objective life situations (Liang and Fairchild, 1979).

It has been noted that the aged as a social category represent an important reference group used by older individuals to evaluate their life situations (Bultena and Powers, 1976). By comparing their situations with those of their age peers, older individuals are said to be able to maintain relatively high levels of subjective well-being. According to Cockerham, Sharp and Wilcox (1983), for example, the tendency for older individuals to yield positive assessments of their health reflects the fact that judgements concerning health tend to be relative and founded on comparisons with age peers. Similarly, Markides, Timbers, and Osberg (1981) speculate that when people reach old age, their perceptions of health do not decline to the same extent as do their objective levels of health because the important reference group on which such perceptions are based (age peers) is also in poorer health (also see Atchley, 1975; Ferraro, 1980; Markides and Pappas, 1982; Rakowski and Cryan, 1990; and Shanas et al., 1968 for similar arguments).

A similar view is proposed by Liang and Fairchild (1979) and Liang, Kahana and Doherty (1980) to account for relationships between objective and subjective economic well-being. They note that since most older people experience a decline in income with retirement, this may

serve to reduce the degree of deprivation these individuals perceive when comparing themselves with others.

According to Bultena and Powers (1976), however, the tendency of older individuals to derive positive assessments of well-being from their comparisons with age peers is enhanced by the misconceptions they (and others in society) tend to have regarding the situations characteristic of their age peers. The prominence of stereotypes that depict old age as a period of life characterized by such things as declining physical and mental capacities, poor health and dependency is said to result in a situation where older individuals do not compare their circumstances to the actual circumstances of their age peers but rather, to those (even poorer circumstances) perceived as being characteristic of the stereotypical reference group.

O'Gorman (1980) asserts that older individuals frequently misjudge the extent to which they are similar to as well as different from the majority. He notes that this represents a 'false consciousness of kind' that, in turn, reflects a more general condition of 'pluralistic ignorance'. To the extent that individuals' perceptions of the situations of others is distorted, their perceptions regarding their own situations (which are based on comparisons with those others) are also distorted and therefore, false.

Evidence presented by O'Gorman (1980) reveals support for this view. Based on the use of national survey data (Harris et al., 1975), he reports that when respondents under 65 and 65 or older were asked to assess the seriousness of various problems (including financial problems, health, loneliness, poor housing, etc.) in their own lives, a minority

(ranging from 3 percent for problems with clothing to 23 percent for problems associated with the fear of crime) of those in both age groups reported that they were personally "very serious". As well, the distribution of responses among those aged 65 and over was found to approximate that of respondents aged 18 through 64 in terms of the severity of such problems in their own lives. However, a significantly greater number of those in both age groups perceived such problems to be "very serious" for the majority of persons aged 65 and over.

The tendency to overestimate the severity of problems encountered by the majority of older individuals was greater among those older individuals who regarded such problems as being very serious in their own lives. While these individuals tended to regard themselves as part of the majority of older adults who were subject to such problems, those who indicated that the various problems were either "hardly a problem" or only "somewhat serious" in their own lives tended to view themselves as being exceptions.

Whether the tendency of older individuals to view their situations positively in terms of age peers accounts for disparities between objective and subjective well-being has yet to be empirically demonstrated. However, what research evidence is available supports the view that not only do older individuals assess their situations positively when compared with their age peers but also, appear to do so to an extent greater than those in other age groups (see Cockerham, Sharp and Wilcox, 1983; Stoller, 1984; Liang and Fairchild, 1979; Bultena and Powers, 1976).

In research conducted by Bultena and Powers (1976), older respondents were asked to rate various aspects of their life situations

(including their health, physical mobility, income and social interactions) relative to those of their age peers. The findings revealed that within each of the areas examined, the majority of respondents (from 67 to 85 percent) reported either being similar to or better off when compared with others of the same age.

Other findings attest to the significance of self-other comparisons for subjective assessments of well-being. Tissue (1972) reports a strong positive correlation between elderly respondents' perceptions of health compared to that of age peers, and self-ratings of health. Similarly, Bultena and Powers (1976) report significant positive correlations among comparative assessments of health, income, and social interaction and life satisfaction among older respondents that persisted despite the introduction of controls for objective status in each area. Their regression of life satisfaction on objective and comparative measures of health, income and other factors revealed both types of measures to be important. Health emerged as the most important predictor followed by comparative assessments of financial well-being, organizational participation, social interaction, actual income, and comparative assessments of health. Over half of the total variance explained was found to be attributable to the inclusion of the comparative measures.

Carp, Carp and Millsap (1982) examined the importance of comparisons made with close friends, relatives, and the typical American for predicting levels of satisfaction with housing, health, and income among three samples of elderly. Their findings also revealed support for the importance of these comparisons. Once included in multivariate

analyses along with comparative assessments involving perceptions of equity, aspirations and expectations, comparisons made with friends and with the typical American emerged as significant.

Similar findings are reported by Usui, Keil and Durig (1985) in their investigation of the importance of comparisons made between one's own situations and those of one's primary groups (including close friends, relatives, and neighbours) for subjective assessments of well-being among the elderly. Using a sample of noninstitutionalized individuals aged 60 and over, they found respondents' perceptions of financial well-being when compared with the relative to whom they felt closest to be a significant and positive predictor of satisfaction, independent of such factors as age, sex, race, marital status, household size, and health.

The significance of self-other comparisons for determining levels of subjective well-being among the elderly also receives a measure of support from research conducted by Liang and Fairchild (1979). They examined the importance of perceptions of relative deprivation to relationships between objective and subjective economic well-being. To measure perceived relative deprivation, respondents were asked to compare their family incomes to those of American families in general. The majority of respondents (from 59 to 69 percent across six data sets) indicated their incomes were average to far above average. As well, their perceptions of deprivation relative to American families in general were found to mediate the impact of income on assessments of financial well-being.

Further analyses reported by Liang, Kahana and Doherty (1980) reveal somewhat similar findings. Respondents' comparisons of their

financial situations with those of various reference others (such as friends, neighbours, relatives, age peers, and people of similar socioeconomic status) were combined to reflect overall perceptions of relative deprivation. These perceptions were found to mediate between objective and subjective financial well-being and were correlated with age. Within the limited age range represented within their sample (i.e., ages 55 and older), older respondents perceived less inter-individual deprivation than did those who were younger.

Comparative age group analyses conducted by Rodgers and Herzog (1983), however, reveal contrasting findings. Based on data drawn from a national sample of adults aged 18 and over, they report older individuals to be somewhat more likely than those younger to regard their family incomes as being below their perceptions of the average level for American families as well as of those of their own families and friends. No differences were found in the impact of perceptions of deprivation relative to friends and relatives on satisfaction with income among respondents within the different age groups.

Perceptions of Equity or Distributive Justice

Concepts of equity and distributive justice imply another and related standard by which individuals may define or evaluate their situations. These concepts, used largely in the context of exchange theory, suggest that justice within an exchange relationship results when rewards (outcomes) are considered in direct proportion to investments or costs (inputs - see Homans, 1961; Dowd, 1980; Liang, Kahana, and Doherty,

1980). As long as profits can be considered to be directly proportional to investments, the exchange is viewed as being legitimate. If such expectations are violated, however, tension results (Baum and Baum, 1980).

Use of the concepts of equity and distributive justice suggest that people may define their situations as being just or equitable regardless of how just or equitable they actually are or appear to others to be. According to most of the major theoretical formulations, equity and justice are also evaluated relationally; that is, based upon how people view their inputs and outcomes in comparison with other relevant persons or groups (Gartrell, 1985:1987). Those who perceive their lot in life as legitimate (or perhaps, as more than legitimate) are considered likely to be relatively satisfied whereas those who perceive their investments as justifying a greater return are considered likely to be dissatisfied. The basis for this view is articulated by Durkheim (1959:200 cited in Runciman, 1966:25) who notes:

> What is needed if social order is to reign is that the mass of men be content with their lot. But what is needed for them to be content, is not that they have more or less but that they be convinced that they have no right to more.

Consistent with this view, it has been suggested that the elderly internalize the attitude that they deserve to have relatively little in terms of the objective conditions of life and, as a consequence, settle for what they have (Streib, 1976). According to Maddox and Wiley (1976), the persistence of findings indicating that age is not negatively associated with assessments of well-being suggests that many older people do not perceive there to be an incongruence between their needs, values, and social opportunities. They note that what any older person would

consider a reasonable or fair social exchange need not necessarily be equivalent to that which a social philosopher would consider to be equitable.

Dowd (1975:1980) asserts that older people have in fact, largely accepted their subordinate positions within society. In particular, he notes that they have accepted society's dictum (ideology) that they are entitled to fewer social exchanges and less profit than other people and therefore, have come to view their profit and investment levels as adequate (Dowd, 1980:60). In his view, this not only exemplifies the internalization of an unconscious ideology that makes the inequitable distribution of rewards appear legitimate but, as such, represents a form of false consciousness.

There is relatively little empirical evidence available to indicate whether differences in terms of perceptions of justice or equity do account for age-related disparities in relationships between objective and subjective well-being. Findings reported by Rodgers and Herzog (1983) do indicate, however, that in terms of income, older individuals assert that they deserve less than do those who are middle-aged or younger. The difference between their actual incomes and the incomes they said they deserved to have were also found to be smaller than discrepancies observed among younger respondents. Multivariate analyses conducted within each of four age groups (i.e., those aged 25 to 39, 40 to 54, 55 to 64, and 65 and over) revealed perceptions of equity to be a significant predictor of satisfaction with income in each group. However, no differences were evident in the importance of perceptions of equity for predicting satisfaction with income among the different age groups.

Liang, Kahana and Doherty (1980) examined relationships between objective economic status and perceived financial well-being among individuals aged 55 and over. No evidence was found to indicate a significant impact of age (net of sex, race, social status, labour force participation, income, and perceptions of relative deprivation) on perceptions of equity within their sample. However, their findings revealed perceptions of equity in relation to income mediated the impact of objective on subjective economic well-being.

Research conducted by Carp, Carp and Millsap (1982) also attests to the significance of equity considerations for subjective assessments of well-being among the elderly. They compared the importance of equity as a standard of comparison to a number of other standards (including the typical American, aspirations, and close friends) for predicting subjective assessments of well-being. Respondents were asked to rate their actual situations (in terms of health, housing, and income) as well as those they felt they deserved to have should everything be fair. The differences between respondents' ratings of their own current situations and their ratings of the situations they felt they currently deserved to have measured perceptions of equity.

According to the findings reported by Carp, Carp, and Millsap (1982), equity considerations emerged as being significantly better predictors of happiness and life satisfaction than did any of the other standards of comparison included in the analyses. This was the case for each of the samples used as well as for each of the areas (health, housing, income) examined.

The findings reported by these authors as well as others (Liang,

Kahana and Doherty, 1980; Rodgers and Herzog, 1983) suggest the potential significance of justice or equity considerations for an understanding of age-related gaps between objective and subjective well-being. Once again, however, they fall well short of providing an actual empirical test of the hypothesis.

c. Accommodation or False Consciousness: Selecting Among Competing Positions

The preceding discussion has focused on whether or not age-related differences in subjective assessments of well-being reflect differences in how those in different age groups respond to their objective life situations. Moreover, it has outlined two distinct and competing interpretations of disparities between objective and subjective dimensions of well-being said to be evident among the elderly. Both interpretations focus on the role of subjective, interpretive factors for an explanation of the disparities. Yet, they differ in two respects: (1) with regard to the specific perceptual factors they consider to be important; and (2) their views concerning how particular subjective interpretations are arrived at.

The first of these two positions attributes disparities involving objective and subjective well-being among the elderly to <u>accommodation</u> processes; thus, to the attempts made by older individuals to come to terms with, cope, and make the best of their situations. Accommodation on the part of the elderly is said to be reflected, on the one hand, in the lack of disparity perceived as being evident between their current situations and either their aspirations or expectations (due to the

deliberate reduction of the latter). On the other, it is said to be reflected in perceptions regarding their lack of ability to exert control over (and thereby, to alter) their life situations. In both cases, however, it represents a subjective appraisal formed within a social context that in reality restricts older individuals' access to opportunities and resources necessary for altering their conditions.

The second position, in contrast, interprets evidence of disparities between objective and subjective well-being among the elderly as a reflection of <u>false consciousness</u>; that is, of the inaccurate perceptions older individuals tend to have regarding their own objective conditions. Evidence of false consciousness among the elderly is found in both the lack of disparity perceived as being evident between their own current circumstances and the circumstances of others with whom they compare themselves as well as in the lack of disparity perceived between their circumstances and those considered to be just or fair. Faulty perceptions of this nature are said to result from age-related social norms and stereotypes embedded within the social structure, institutions and values of society and which are internalized by the elderly and subsequently applied to their understanding of their own situations.

Issues of whether or not age-related differences exist in the responsiveness of individuals to their objective life situations (thus, whether the differences between age groups observed at the aggregate level also reveal differences among individuals) and which, if either, of an accomodation or false consciousness interpretation more accurately accounts for age-related disparities involving objective and subjective well-being are ultimately empirical questions.

To assess age differences in responsiveness to objective conditions, interaction effects involving age and indicators of objective well-being, as they influence subjective well-being, can be examined. To assess the relative utility of the accommodation and false consciousness interpretations, various strategies would at first seem possible. For example, one could conduct a comparative assessment of the impact of objective as well as perceptual factors on subjective assessments of well-being among those within different age groups. As noted previously, whereas an accommodation explanation tends to accompany a focus on the importance of perceptions of attainment and of personal efficacy or control, a false consciousness interpretation is more often used by those who emphasize the importance of both perceptions of relative deprivation and distributive justice.

As a result, should the findings reveal that the elderly perceive less disparity between their current situations and their aspirations or expectations, that this is due to the lower levels of aspiration and expectation evident among the elderly, and that this accounts for their more positive assessments of subjective well-being (and consequent disparity between their objective conditions and subjective assessments), this would be interpreted as support for the accommodation position. Conversely, should the findings reveal that the elderly perceive less of a discrepancy between their own conditions and the conditions of others than do those within other age groups and that, as a result, they also maintain more positive assessments of subjective well-being, this would represent support for a false consciousness interpretation.

However, this strategy seems unlikely to provide an adequate

answer. Aside from prevailing usage, there is nothing necessary nor inevitable about the links established between perceptions of attainment, personal efficacy or control and the accommodation hypothesis, or between perceptions of relative deprivation, perceptions of distributive justice, and the false consciousness position. Therefore, despite the fact that reduced aspirations and expectations are generally conceptualized from an accommodation stance, it could perhaps equally well be argued that reductions in levels of aspiration and expectation reflect internalized norms (which hold that elderly individuals should expect and/or aspire to less than those in other age groups) or that aspirations and expectations are conditioned by perceptions of relative deprivation and, as a consequence, represent yet another example of false consciousness.

Alternatively, it could be argued that perceptions of relative deprivation and of distributive justice also represent deliberate and conscious attempts on the part of elderly individuals to come to terms with their situations and as such, represents a form of coping or accommodation. As noted by Pearlin (1981:346), for example:

> The range of behavior that can be called upon to cope with life's challenges is ... varied... (W)ithin this range is a class of coping responses that functions to control the meaning of problematic situations that helps to neutralize their threat...(P)eople perceptually seek out other persons or groups whose economic position is either worse or, at least, no better than their own. In selectively contrasting their own economic standing with those who may be engaged in a more severe struggle, they arrive at a positive appraisal of their own circumstances.

Ultimately, the key difference between the two positions revolves around the issue of motivation - that is, whether elderly individuals are motivated to enhance their subjective assessments of well-being (and

therefore, to accommodate themselves to their situations) or whether positive well-being among the elderly is simply a byproduct of their false consciousness. Regardless of which is the case, individuals are likely to yield similar assessments no matter what the particular standard applied.

Therefore, a second strategy and the one to be used here focuses on differences in the relationships among the variables specified within the two models. Each leads to different expectations concerning the manner in which perceptual factors influence relationships between objective and subjective dimensions of well-being. The accommodation position, as noted, is based on the view that older individuals maintain accurate perceptions of their circumstances and that discrepancies between their objective and subjective well-being reflect accommodation on their part to their situations. According to this model, perceptual variables constitute key contextual variables that help determine the impact of objective conditions on subjective well-being. Accommodation (reflected in the perceived lack of disparity between current circumstances and aspirations or expectations as well as in lowered levels of personal efficacy or control), is said to be warranted as a result of a lack of access to objective resources and opportunities and thereby, to the lack of ability on the part of individuals to alter those circumstances.

To the extent that accommodation can therefore be conceptualized as a form of coping behaviour, it is both logical and consistent with the model to expect it to have its greatest impact on those elderly individuals whose objective circumstances are the worst, thereby modifying the impact of their objective conditions on their subjective well-being.

Among those whose objective circumstances are relatively good, there would appear to be little need to make the best of things and accommodate. As a result, one would expect their assessments of subjective well-being to be more or less consistent with their objective circumstances.

In contrast, the false consciousness interpretation suggests that elderly individuals maintain inaccurate perceptions of their situations and that this is reflected in their relatively low assessments of relative deprivation and distributive injustice. Unlike the realist position, there is no reason to infer that the impact of perceptual factors will vary depending upon objective conditions. Rather, since perceptions are said to be conditioned by age-based social norms and stereotypes, one can assume that, if this model is correct, they are likely to be evident throughout the age group. Therefore, interaction involving these variables is absent. Rather, perceptions simply serve to mediate the effects of objective on subjective well-being.

3. Research Focus

The literature reviewed above points to the generalizeability of age-related differences in subjective well-being and suggests these differences may reflect age-related differences in response to objective conditions. Two alternative models for explaining these differences were subsequently addressed - an accommodation model that attributes age-related disparities between objective and subjective well-being to the ability of older adults to cope or come to terms with their situations - and a false consciousness model that views age-related disparities as the

result of the inaccurate perceptions that older adults tend to have regarding their situations.

Given the theoretical as well as practical importance of determining whether or not and, if so, why it is that older adults appear to be more satisfied with less, the principal objectives of this study are:

- to examine whether age affects relationships between objective and subjective (health, economic, and overall) well-being at the individual as well as aggregate level; and

- to assess the relative adequacy of the accommodation and false consciousness models for an understanding of these differences.

In order to meet the latter objective, the following research questions are addressed:

1. Does accommodation (reflected in perceptions of attainment, distributive justice, relative deprivation, and personal efficacy) serve to offset, and thereby explain, the otherwise negative implications of poorer objective conditions for subjective assessments of well-being among the elderly or, do disparities between objective and subjective well-being among the elderly reflect the positive perceptions (of attainment, distributive justice, relative deprivation, and personal efficacy) that older adults tend to have regarding their situations?; and

2. Do these factors account for the differences in the relationships observed between objective and subjective well-being among different age groups?.

4. Data Source

Given the primary importance of health and economic concerns in the lives of elders, the analyses are conducted focusing on relationships between objective and subjective assessments of health and economic well-being. Secondary data drawn from several different data sets including the Social Change in Canada surveys conducted by the Survey Research Centre, Institute for Behavioural Research, at York University, Toronto, Ontario in 1977, 1979, and 1981 are used. Each is a large-scale social survey conducted using a probability sample of adults living in Canada.

5. Plan of the Thesis

The methodology of the study is presented in detail in Chapter II. The data sources are discussed, the measurement of key variables presented, and procedures for data and sample characteristics outlined. The findings are presented in Chapter III. They begin with a discussion of the findings obtained relevant to relationships between income and subjective economic well-being. Findings regarding relationships between objective and subjective health and between income, health, and overall subjective well-being follow. These findings form the basis for a discussion of the meaning of deprivation and discontent in the lives of

elders, presented in Chapter IV. Finally, a more general discussion of the findings and the conclusions drawn from them are presented in Chapter V.

Chapter II

DATA AND METHODOLOGY

1. Data Source

Data for this study were drawn from three national sample surveys conducted as part of the Social Change in Canada research project carried out by the Survey Research Centre, Institute for Behavioural Research, York University.[1] Three data sets were used to enable a stronger test of the research questions than would be possible using one data set alone. These surveys were conducted in 1977, 1979, and 1981 and were designed to measure respondents' perceptions of their quality of life (both generally and in designated areas), aspirations and expectations, personal values, feelings of alienation, and policy attitudes and priorities.[2]

For each of the three cross-sectional surveys, data were collected from a national probability sample of individuals aged 18 and over living in households in Canada but excluding those in the far north, the Yukon

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[1] This project was directed by Tom Atkinson, Bernard Blishen, Michael Ornstein and H. Michael Stevenson of York University. The research was supported by the Social Sciences and Humanities Research Council of Canada (Grant #S75-0332). The data files were made available by the Institute for Behavioural Research at York University. Neither the principal investigators nor the disseminating archive are responsible for the interpretations presented here.

[2] The format of each survey closely resembles that used in the Quality of Life studies conducted by the Survey Research Centre at the University of Michigan and used by Andrews and Withey (1976) as well as Campbell, Converse and Rodgers (1976) in their investigations into the Quality of Life in America.

and Northwest Territories, residents of Indian reservations, and those housed in public or private institutions. Respondents from Toronto and Montreal were oversampled in order to develop an urban panel which could be reinterviewed at several points over the duration of the project.

Regional stratification procedures were employed in order to obtain samples representative of the populations of the Atlantic provinces, Quebec, Ontario, the Prairie provinces, and British Columbia. For the urban panel, socioeconomic status and life cycle stage were used. Respondents were selected through the use of multi-stage sampling procedures. In the first stage, enumeration areas were sampled. Thereafter, individual dwellings, households, and finally, household members (aged 18 or older) were randomly and systematically selected.

Interviews were conducted with 5,822 different individuals over the three waves of the project. Table 1 reports the completion rates obtained in 1977 and 1979. (These data were not available for 1981.) For purposes of this investigation, subsamples consisting of those respondents aged 35 and over, within each of the three surveys, are used. This results in samples consisting of 1,935 respondents in 1977, 1,742 respondents in 1979, and 1,765 respondents in 1981. Weighting procedures are necessary in order to obtain samples which more closely approximate the Canadian population at the time each survey was conducted. Due to household selection methods, stratification procedures, and variable response rates, the data are not self-weighting.

To estimate the representativeness of the subsamples, each was compared to the general population aged 35 and over in Canada as measured by both the 1976 census and 1981 census. Intercensal estimates for age,

Table 1

Survey Completion Rates

	1977		1979		1981	
	N	%	N	%	N	%
Completed interviews	3288	67	3475	61	3953	63
Illness or age	178	4	179	3	214	3
Refusals*	811	16	1444	26	1594	25
Absent	482	10	423	7	394	6
Language difficulties	120	2	106	2	99	2
Other	50	1	76	1	74	1
Total	4929	100	5703	100	6328	100

* Increased nonresponse due to refusals in 1979 and 1981 resulted from the inclusion of respondents from the urban panel.

sex, and marital status are used for the 1979 comparisons. Table 2 presents the results of comparisons made using the 1977 survey data. Tables 3 and 4 provide similar comparisons for the 1979 and 1981 samples.

A comparison of the characteristics of the respondents with those of the Canadian population (aged 35 and over) as a whole indicates that differences between the unweighted samples and target populations are relatively small. Nevertheless some differences do emerge: males, for example, are somewhat under-represented.[3] As well, residents of Quebec are over-represented while those living in Ontario (in the 1977 sample) and the Prairie provinces (in the 1977 and 1981 samples) are under-represented. For the most part, weighting procedures successfully reduce these differences and are therefore used throughout the analyses.[4]

2. Measurement

In this study, data from each of the three cross-sectional surveys are being used to examine relationships between age and subjective indicators of well-being. The focus of investigation is on whether relationships between objective and subjective well-being vary among age

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[3] Over-sampling of female respondents is a relatively common occurrence in household sample surveys (see Campbell, Converse and Rodgers, 1976; Gove and Hughes, 1979).

[4] The specific weight factors used were available in each of the data files. They were developed to take into account differential response rates, over-sampling due to stratification, and differences between male and female respondents.

The use of weighted samples facilitates generalization to the general population. However, because the weighted number of cases is, in each case, slightly less than the actual number of cases, tests of significance may be somewhat deflated.

Table 2

Comparison of 1977 Sample Characteristics with Canadian Census Data (1976) for Population Aged 35 and over (%'s)

	Unweighted Sample (N=1935)	Weighted Sample (N=1900)	1976 Census	Diff. Sample vs. Census	Diff. Wgt. Sample vs. Census
1. Age					
35 - 49	44.0	44.5	43.0	1.0	1.5
50 - 64	34.1	36.3	35.1	-1.0	1.2
65 - 74	15.1	13.2	14.0	1.1	-0.8
75 +	6.7	6.0	8.0	-1.3	-2.1
2. Sex					
Male	41.5	49.9	48.3	-6.8	1.6
Female	58.5	50.1	51.7	6.8	-1.6
3. Region					
Atlantic	11.5	9.4	8.7	2.8	0.7
Quebec	32.1	25.4	26.6	5.5	-1.2
Ontario	34.0	36.7	37.1	-3.1	-0.4
Prairies	12.1	17.8	16.2	-4.1	1.6
B.C.	10.2	10.8	11.3	-1.1	-0.5
4. Marital Status					
Single	7.0	4.8	8.2	-1.2	-3.4
Married*	75.8	84.6	78.0	-2.2	6.6
Widowed	14.0	8.6	11.5	2.5	-2.9
Divorced	3.2	2.0	2.4	0.8	-0.4
5. Education					
No university/ post secondary	74.3	74.5	75.4	-1.1	-0.9
Some university/ post secondary	17.3	17.3	19.4	-2.1	-2.1
University degree	8.4	8.1	5.2	3.2	2.9
6. Employment					
Employed	49.4	53.3	52.2	-2.8	1.1
Unemployed	2.1	2.3	2.2	-0.1	0.1
Not in labour force	48.5	44.4	45.6	2.9	-1.2

*includes separated

Source: Statistics Canada, 1976 Census, Supplementary Bulletins: Geographic and Demographic Characteristics (Catalogue 92-835); Population, Demographic Characteristics, Marital Status by Age Groups (Catalogue 92-825); and Labour Force Activity by Age, Sex and Educational Characteristics (Catalogue 94-806).

Table 3

Comparison of 1979 Sample Characteristics with Canadian Intercensal Estimates (1979) for Population Aged 35 and over (%'s)

	Unweighted Sample (N=1742)	Weighted Sample (N=1731)	1979 Inter-Census	Diff. Sample vs. Census	Diff. Wgt.Sample vs. Census
1. Age					
35 - 49	43.4	44.3	42.5	0.9	1.8
50 - 64	33.9	36.2	34.9	-1.0	1.3
65 - 74	15.8	13.5	14.2	1.6	-0.7
75 +	6.8	6.1	8.4	-1.6	-2.3
2. Sex					
Male	39.6	46.8	48.2	-8.6	-1.4
Female	60.4	53.2	51.8	8.6	1.4
3. Marital Status					
Single	11.0	4.5	8.0	3.0	-3.5
Married*	69.5	83.3	77.9	-8.4	5.4
Widowed	15.5	9.7	11.5	4.0	-1.8
Divorced	4.0	2.5	2.6	1.4	-0.1

*includes separated

Source: Statistics Canada, Intercensal Annual Estimates of Population by Marital Status, Age and Sex for Canada and the Provinces, 1976-1981 (Catalogue 91-519). Ottawa: Supply and Services Canada, 1983.

Table 4

Comparison of 1981 Sample Characteristics with Canadian Census Data (1981) for Population Aged 35 and over (%'s)

	Unweighted Sample (N=1765)	Weighted Sample (N=1748)	1981 Census	Diff. Sample vs. Census	Diff. Wgt.Sample vs. Census
1. Age					
35 - 49	42.2	43.6	42.3	-0.1	1.5
50 - 64	34.0	36.0	34.1	-0.1	1.9
65 - 74	16.0	14.7	14.8	1.2	-0.1
75 +	7.8	5.7	8.8	-1.0	-3.1
2. Sex					
Male	41.5	48.3	48.0	-6.5	0.3
Female	58.5	51.7	52.0	6.5	-0.3
3. Region					
Atlantic	12.7	10.8	8.6	4.1	2.2
Quebec	28.1	24.7	26.4	1.7	-1.7
Ontario	36.8	38.2	37.0	-0.2	1.2
Prairies	10.9	16.8	16.2	-5.3	0.6
B.C.	11.4	9.5	11.8	-0.4	-2.3
4. Marital Status					
Single	10.3	5.1	7.7	2.6	-2.6
Married*	68.6	81.6	77.2	-8.6	4.4
Widowed	15.2	9.5	11.5	3.7	-2.0
Divorced	5.8	3.7	3.6	2.2	0.1
5. Education					
No university/ post secondary	69.3	71.1	69.1	0.2	2.0
Some university/ post secondary	21.2	19.9	23.6	-2.4	-3.7
University degree	9.5	9.0	7.2	2.3	1.8
6. Employment					
Employed	53.8	57.2	54.9	-1.1	2.3
Unemployed	2.6	2.4	2.8	-0.2	-0.4
Not in labour force	43.6	40.4	42.3	1.3	-1.9

*includes separated

Source: Statistics Canada, 1981 Census, Population, Age, Sex and Marital Status (Catalogue 92-901); Population: Labour Force - Occupation by Demographic and Educational Characteristics (Catalogue 92-917); and Population: Language, Ethnic Origin, Religion, Place of Birth and Schooling (Catalogue 93-931). Ottawa: Supply and Services Canada, 1983.

groups and the extent to which this variation can be explained by perceptual differences among them. Those perceptual variables which, on the basis of available literature, appear to hold promise for an understanding of such variations are examined. They include: perceptions of attainment considered relative to both aspirations and expectations; perceptions of distributive justice; perceptions of relative deprivation; and perceptions of personal efficacy or control. Each is examined in terms of its significance for defining relationships between objective and subjective well-being. In particular, analyses focus on the relationships between income and subjective assessments of economic well-being; health and subjective assessments of health; and finally, both income and health and overall assessments of well-being as these vary by age. These areas were selected based on evidence indicating their particular salience in the lives of older adults (Bearon, 1989; Keith, 1985). The specific variables and the control measures used in the analyses are operationalized as follows:

a. Subjective Well-Being

Three measures of the dependent variable, subjective well-being, are examined. They include: subjective economic well-being, perceived health status, and overall assessments of well-being.

Subjective Economic Well-Being:

Subjective economic well-being is operationalized on the basis of respondents' indications of financial satisfaction. For analyses using data from the 1977 survey, this consists of responses to a single-item question asking respondents: "With all things considered, how satisfied are you with your present financial situation?". Possible responses range from a low of 0 (indicating complete dissatisfaction) to a high of 10 (indicating complete satisfaction).

Single item indicators such as this tend to be vulnerable to measurement error and to have less reliability and validity than well-constructed multiple-item measures (Andrews and Withey, 1976).[5] Therefore, given the availability of a number of measures of subjective economic well-being in both the 1979 and 1981 surveys, multiple-item indicators were developed for analyses using these data sets. These indicators combine responses to the following three questions:

1. "How satisfied or dissatisfied are you with your family's (your) present income?";

2. "How satisfied or dissatisfied are you with your standard of living?"; and

3. "All things considered, how satisfied or dissatisfied are you with your present financial situation - your income, standard of living, debts, savings, and so on?".

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[5] Two year stability coefficients for these indicators are .52 (for the panel interviewed in 1977 and 1979) and .53 (for the panel interviewed in 1979 and 1981). Rodgers and Converse (1975) report somewhat higher coefficients using six to eight month intervals (i.e., .55 to .65).

Responses to each item (ranging once again from a low of zero to a high of ten) were summed and subsequently averaged in order to yield a measure of subjective economic well-being. Correlations among the items are strong and range from .75 to .86 (in the 1979 data) and .78 to .84 (in the 1981 data). Inter-item reliability coefficients for the three-item indices are .92 (1979 and 1981).[6]

The distributions of responses for each measure are provided in Table 5. As is often the case when subjective indicators of well-being are examined, responses tend to be somewhat concentrated at the positive ends of the scales (see Andrews and Withey, 1976; Campbell, Converse and Rodgers, 1976); skewness exceeds one-half of a scale point for each measure (-.72 for 1977; -.88 for 1979; and -.67 for 1981). If scores between four and six reflect neutral or average assessments of economic well-being, from 57.0 percent (1977) to 64.3 percent (1979) of the respondents report positive levels of subjective well-being (i.e., scale values from seven to ten) while only 7.7 percent (1981) to 13.4 percent (1977) report negative assessments of economic well-being (i.e., scale values from zero to three).

The tendency for responses to be located at the positive end of the distributions might be interpreted as an indication of limitations on the ability of these indicators to discriminate among the respondents located within this cluster. However, these data nevertheless do allow a fair degree of differentiation at the positive end of the scale. In

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[6] The alpha coefficient provides a measure of internal consistency. Based on the assumption that each item reflects the same underlying construct, alpha provides an estimate of the proportion of the test variance resulting from common factors among the items (Cronbach, 1951).

Table 5

Frequency Distributions: Subjective Economic Well-Being

	1977		1979		1981	
	N	%	N	%	N	%
0 low	60	3.2	14	0.8	14	0.8
1	37	2.0	25	1.4	23	1.3
2	65	3.4	32	1.9	32	1.8
3	91	4.8	65	3.8	66	3.8
4	116	6.2	78	4.5	106	6.1
5	229	12.1	158	9.1	194	11.1
6	216	11.4	246	14.2	310	17.8
7	328	17.3	412	23.8	383	22.0
8	327	17.3	349	20.2	278	15.9
9	251	13.3	237	13.7	234	13.4
10 high	171	9.0	113	6.5	104	6.0
Total	1891	100.0	1728	100.0	1744	100.0
$\bar{X}$	7.5			7.8		7.6
S.D.	2.5			2.0		2.0

analyses reported by Campbell, Converse and Rodgers (1976), 7-point satisfaction scales were used. In general, about two-thirds of their sample was found to cluster in the top two scale categories. Yet, for the 11-point scale used in the present study, this is the case for only 19.4 percent to 22.3 percent of the samples surveyed. To meet the requirements of many statistical procedures for reasonably symmetric distributions, square transformations of these dependent variables are employed.

Perceived Health Status:

Subjective assessments of health are operationalized on the basis of respondents' answers to the question: "How would you describe your health - would you say it was excellent, very good, good, fair, or poor?". Assessments of this nature are widely used in the literature and display moderately high correlations with measures of satisfaction with health. (For these data, correlations between these measures were .67 in 1977; .66 in 1979; and .66 in 1981).

Precise estimates of the reliability of these measures are unavailable. However, some indication of their reliability is possible through examining the consistency of responses given at different points in time (i.e., by members of the panel). Stability coefficients - the correlations among items measured at different points in time - are somewhat similar to test-retest reliability coefficients. However, given the time lapse between successive measurements (i.e., either two or four years), a fair amount of real change is likely to have occurred, thereby resulting in significantly reduced coefficients. As noted by Campbell,

Converse and Rodgers (1976), these coefficients can therefore be interpreted as indications of minimum reliability.

For these data, two-year stability coefficients for measures of perceived health were .60 (for those interviewed in 1977 and 1979) and .64 (for those interviewed in 1979 and 1981). These coefficients are moderately strong and, as a result, suggest that relatively high levels of reliability characterize these measures.

Table 6 reports the distributions for respondents' perceptions of their health. In each year, the vast majority of respondents (over 75 percent) rated their health positively (i.e., as being either good, very good, or excellent). Relatively few respondents rated their health as poor or fair.

Perceived Overall Well-Being:

To examine overall assessments of well-being, a somewhat different measure was used for analyses of data drawn from the 1977 survey than were used for analyses based on data drawn from those surveys conducted in 1979 and 1981. For analyses of the 1977 data, a series of semantic differential type items were used. Respondents were confronted with a series of bipolar adjectives and were asked to indicate which number (given a range of one through seven) between these adjectives best described their present lives. When combined, these items yield a measure comparable to Campbell, Converse and Rodgers' (1976) Index of General Affect.

Table 6

Frequency Distribution: Perceived Health Status

	1977		1979		1981	
	N	%	N	%	N	%
Excellent	279	14.7	244	14.1	245	14.0
Very Good	585	30.9	553	32.0	637	36.5
Good	614	32.4	546	31.6	485	27.8
Fair	350	18.4	319	18.5	312	17.9
Poor	68	3.6	67	3.9	67	3.8
Total	1896	100.0	1729	100.1	1746	100.0

A correlation matrix for the sixteen items initially considered for inclusion in the scale is presented in Table 7. For the most part, the items correlate positively, significantly, and consistently. The lowest correlations are evident for the lonely-not lonely, organized-disorganized, and hard-easy dichotomies.

In order to assess whether the items measured a single construct, they were also analyzed by means of a classical (R-Type) factor analysis (see Table 8). The results do not, at first glance, support the unidimensionality of the scale. Rather, three factors emerge of which two have eigenvalues greater than one.

Rotation to a varimax solution reveals a rather distinct clustering of items which corresponds with the positive and negative ordering of the items in the questionnaire. The first factor includes dichotomies (such as satisfying-dissatisfying, organized-disorganized, happy-unhappy, and comfortable-uncomfortable) in which the positive pole was presented to the respondents first. In contrast, the second factor is defined by items (such as boring-interesting and disappointing-rewarding) where the ordering of the poles was reversed.

Two items (tense-relaxed and hard-easy) fail to load on either factor. These items appear to tap a stress-related dimension which is both conceptually and empirically distinct from general feelings of satisfaction or well-being. As a result, they are excluded from subsequent analyses using this scale.[7] Two additional items (lonely - not lonely and organized - disorganized) also demonstrate somewhat low

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[7] For similar reasons, these same two items were excluded by Campbell, Converse and Rodgers (1976) in constructing their Index of General Affect.

Table 7

Correlation Matrix for Subjective Well-Being Items: 1977

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1.00															
2	.31	1.00														
3	.40	.16	1.00													
4	.17	.42	.08	1.00												
5	.53	.20	.36	.16	1.00											
6	.34	.53	.24	.39	.23	1.00										
7	.24	.45	.15	.40	.21	.64	1.00									
8	.53	.26	.36	.16	.63	.30	.24	1.00								
9	.31	.49	.18	.37	.27	.52	.54	.31	1.00							
10	.35	.22	.29	.17	.27	.29	.23	.29	.29	1.00						
11	.55	.32	.41	.24	.54	.36	.30	.58	.42	.43	1.00					
12	.26	.35	.16	.39	.28	.38	.41	.28	.43	.17	.31	1.00				
13	.59	.29	.38	.17	.60	.35	.28	.62	.38	.39	.66	.28	1.00			
14	.25	.33	.17	.30	.25	.40	.33	.25	.40	.12	.22	.51	.29	1.00		
15	.26	.17	.18	.15	.25	.21	.23	.21	.24	.38	.39	.14	.33	.06	1.00	
16	.35	.47	.20	.34	.27	.55	.54	.31	.56	.26	.42	.47	.42	.47	.26	1.00

Items: 1. boring-interesting; 2. satisfying-dissatisfying; 3. lonely-not lonely; 4. organized-disorganized; 5. useless-worthwhile; 6. happy-unhappy; 7. comfortable-uncomfortable; 8. meaningless-meaningful; 9. ideal-intolerable; 10. tense-relaxed; 11. disappointing-rewarding; 12. capable-helpless; 13. disgusting-enjoyable; 14. active-passive; 15. hard-easy; 16. good-bad.

Table 8

Factor Loadings for Subjective Well-Being Items (1977)

Item	Extracted 1	Extracted 2	Extracted 3	Rotated 1	Rotated 2	Rotated 3	h^2
Comfortable	.61	.40	.13	.70	.09	.25	.55
Happy	.67	.34	.12	.69	.17	.27	.58
Good	.69	.29	-.01	.68	.26	.17	.56
Ideal	.67	.28	.06	.66	.22	.22	.53
Capable	.56	.27	-.25	.61	.25	-.10	.44
Satisfying	.58	.30	.05	.61	.15	.18	.43
Active	.51	.27	-.34	.59	.25	-.21	.45
Organized	.45	.32	.00	.54	.01	.10	.30
Disgusting	.72	-.38	-.03	.23	.75	.24	.67
Useless	.61	-.42	-.20	.15	.75	.04	.59
Meaningless	.64	-.39	-.19	.19	.74	.06	.60
Disappointing	.73	-.33	.12	.25	.67	.37	.65
Boring	.64	-.32	-.04	.22	.66	.19	.51
Lonely	.43	-.27	.01	.10	.46	.17	.26
Tense	.47	-.17	.33	.17	.33	.47	.36
Hard	.40	-.13	.35	.14	.25	.46	.29
Eigenvalue				5.65	1.58	0.53	
% of variance				35.3	9.9	3.3	

commonality. However, because they nevertheless do load on the two main factors, they were retained for purposes of further analyses.

This was not the case with regard to the items labelled "capable helpless" and "active - passive". Research in gerontology suggests one can well be happy and satisfied with one's life whether or not one is active or involved (see, for example, Larson, 1978). As a result, based on their likely association with age-related differences in functional capacity, these two items were deleted from the summary well-being measure. It is important to ensure that whatever measure is used has the same meaning to those in different groups. Findings derived from factor analyses conducted separately across the three age groups support this decision (see Table 8a, Appendix A), indicating differences in factor loadings on these items by age group.

On the one hand, the results of the factor analyses suggest a need to differentiate between positive and negative dimensions of well-being. However, because these dimensions so closely approximate the wording of the items presented to the respondents, rather than represent distinct conceptual dimensions, their differentiation likely reflects nonrandom (systematic) measurement error as a consequence of response set among the two sets of scale items. Construct validation procedures (whereby correlations between each dimension and other relevant external variables are compared) support this view and suggest that the scale is, in fact, likely to be unidimensional (see Table 9). With the exception of a few relatively modest differences in the magnitude of the coefficients, both positive and negative well-being factors relate similarly to most of the external variables.

Table 9

Zero-Order Correlations Between Positive and Negative Indices of Subjective Well-Being and Selected External Variables

Variable	Positive Factor	Negative Factor
Education	.05	.13
Family Income	.06	.14
Number of Days Ill	-.13	-.12
Perceived Health	-.23	-.22
Satisfaction with Health	.31	.26
Satisfaction with Income	.30	.25
Life Satisfaction	.54	.44
Personal Efficacy	.27	.26

To construct the final index, responses to the individual component items were summed and divided by the number of items responded to. Those who responded to less than two-thirds of the items (i.e., 8 out of 12) were considered as missing. Inter-item reliability for this index reaches .87. The distribution of responses is presented in Table 10. Skewness is, once again, dealt with by means of square transformation. This reduces the amount of skew evident in the distribution from -.69 to -.24.

Similar items were not available in the surveys conducted in 1979 and 1981. Therefore, somewhat different measures were used. In each of these surveys, respondents were asked:

1) "Generally speaking, how happy would you say you are - very happy, fairly happy, or not too happy?";

2) "How often do you feel that you are really enjoying life? Would you say - all the time, fairly often, now and then, or rarely?";

3) "How often do you feel in low spirits or depressed? Would you say - fairly often, now and then, rarely, or never?".

Factor analyses of these items produced one underlying factor with an eigenvalue greater than one and accounting for 43.4 percent (1979) and 45.7 percent (1981) of the variance (Table 11). Separate analyses conducted within each of the three different age groups (i.e., 35-49, 50-64, and 65 and older) revealed only minor variations (see Table 11a, Appendix A). Therefore, it would seem that with respect to these particular measures of subjective well-being, those in different age groups operate with generally similar constructs in mind.

Table 10

Frequency Distribution: Perceived Overall Well-Being

	N	%
1.00 - 3.00	21	1.1
3.01 - 3.50	50	2.6
3.51 - 4.00	135	7.2
4.01 - 4.50	218	11.5
4.51 - 5.00	279	14.8
5.01 - 5.50	386	20.4
5.51 - 6.00	447	23.7
6.01 - 6.50	335	17.8
6.51 - 7.00	17	0.9
Total	1888	100.0
$\bar{X}$		5.2
S.D.		.9

Table 11

Factor Loadings and Communality Estimates for Subjective Well-Being Measures - 1979, 1981

Item	1979 Loading	1979 h^2	1981 Loading	1981 h^2
Happy	.66	.44	.69	.48
Enjoy Life	.74	.51	.73	.53
Depressed	.56	.31	.60	.36
Eigenvalue		1.30		1.37
% of Variance		43.4		45.7

To construct each index, responses to the individual items were standardized and then summed. A constant equal to the highest negative score was then added to each value. Internal consistency for these measures reaches .68 (1979) and .70 (1981). The responses are reported in Table 12.

b. Perceptions of Attainment

To investigate the role played by perceptions of attainment relative to both aspirations and expectations in defining relationships between objective and subjective well-being, this study relies on measures derived from the Cantril (1965) Self-Anchoring Scale.

In the 1977 survey, respondents were asked to assign a score (representing their location on an 11-point Cantril ladder) to each of: (a) their present life situations; (b) the life they expected to have in five years' time; and (c) the best life they could ever hope to have. Similar questions were asked regarding their economic situations specifically: respondents were therefore asked to assign scores ranging from 0 (the worst economic situation they could imagine) through 10 (the best economic situation they could imagine) to each of: (a) their present economic situations; (b) the economic situations which they expected to have in five years; and (c) the best economic situations they could ever hope to have.

Some of the same questions were asked in 1979. However, in this survey, respondents were not asked specific questions concerning their perceived economic situations. Also, rather than being asked about the

Table 12

Frequency Distribution: Perceived Overall Well-Being
1979, 1981

	1979		1981	
	N	%	N	%
0.00 - 1.99	73	4.2	55	3.2
2.00 - 3.99	80	4.6	83	4.8
4.00 - 4.99	154	8.9	162	9.3
5.00 - 5.99	329	19.1	339	19.4
6.00 - 6.99	283	16.4	262	15.0
7.00 - 7.99	214	12.4	184	10.5
8.00 - 8.99	263	15.3	332	19.0
9.00 - 9.99	213	12.4	51	2.9
10.00 +	113	6.6	277	15.9
Total	1722	99.9	1745	100.0
$\bar{X}$		6.7		7.1
S.D.		2.4		2.4

life situations they expected to have in five years' time, the time span referred to was reduced to two years. Finally, the question concerning aspirations was reworded somewhat so that rather than requesting respondents to indicate the best life situations they could ever hope to have, they were asked about those which they could ever 'expect' to have. As a result, it might be argued that the question is more appropriately considered a measure of expectations. However, expectations are usually considered in terms of the foreseeable future whereas aspirations imply a more open-ended time frame.

In 1981, respondents were asked about their own current life situations as well as the best life situations which they could ever expect to have. However, there were no questions requesting respondents to indicate their expectations for a specified time period. Questions concerning economic aspirations or expectations were once again excluded.

Intuitively, it would seem that perceptions of attainment considered relative to aspirations and to expectations could be well-represented by the differences in the scores assigned by the respondents to their own, current life (or economic) situations and those assigned to the life (or economic) situations which they aspired or expected to have at some point in the future. Indeed, this is the strategy which is generally employed (see, for example, Campbell, Converse and Rodgers, 1976; Carp and Carp, 1982; Carp, Carp and Millsap, 1982; Rodgers and Herzog, 1983; Stoller, 1984).

However, despite their simplicity and conceptual appeal, the use of difference scores such as these can be subject to sometimes severe methodological constraints (see Cohen and Cohen, 1975; Cronbach and Furby,

1970). Difference scores compound the unreliabilities of component variables. This problem is likely to be particularly severe when these components are positively correlated with one another (Cohen and Cohen, 1975:64). In particular, the closer the correlation between the component variables is to the average of their reliabilities, the closer the reliability of the difference scores will be to zero. In instances such as this, the correlation between the component variables contributes to the unreliability of the difference score. As the correlation between them increases, so does the unreliability of the outcome measure. As a result, the reliability of the difference score is likely to be lower than that of either component. This, in turn, results in a situation where the correlation between the difference scores and other relevant variables is likely to be severely attenuated. As noted by Cohen and Cohen (1975:64):

> the danger in using difference scores is a real one, since they frequently cannot be expected to correlate very substantially with anything else, being mostly measurement error.

In order to estimate the reliability of such scores, three types of information are necessary: the standard deviation and reliability of each of the component variables and the correlations between them. The standard deviations and between-component correlations are readily available in these data sets and are provided in Table 13. The correlation coefficients are moderately strong, particularly for relationships between perceptions of one's own current situation and expectations for the future. Given the dependence of difference score reliabilities on the correlations among component variables, this provides us with some indication that the difference score measures may suffer from

Table 13

Standard Deviations and Zero-Order Correlations Between Perceptions of Own Current Situation and Aspirations and Expectations

Sample	N*	Own		Expect		Aspire to	
		Life	Econ.	Life	Econ.	Life	Econ.
Standard Deviations:							
1977	1829	1.72	1.93	1.78	2.02	1.35	1.64
1979	1688	1.66	...	1.62	...	1.24	...
1981	1741	1.59	...	...	...	1.21	...
Zero-Order Correlations:							
1977	1829	...	...	.64	.65	.40	.34
1979	1675	...	...	.66	...	.46	...
1981	1741	...	...	...	...	.51	...

* Minimum sample size for a row

lowered reliability.

Unfortunately, the component reliabilities are unknown. As a result, precise estimates of the reliabilities of the difference scores are not possible. However, stability coefficients obtained from the panel data can be used to provide estimates, albeit extremely conservative estimates, of minimum component reliability (Campbell, Converse and Rodgers, 1976). These coefficients are available only for respondents' perceptions of their overall life situations (see Table 14). As noted, the 1979 and 1981 surveys did not ask respondents about their economic aspirations and expectations and consequently, stability coefficients for these measures are unavailable.

Table 15 provides reliability estimates for each of the difference scores using various arbitrary values to indicate the component reliabilities. These estimates suggest that reliability problems associated with these difference scores are particularly apparent where the component reliability is low and for operationalizing perceptions of attainment considered relative to expectations. This of course reflects the relatively strong correlations evident between the component variables.

A number of strategies have in the past been used in an attempt to deal with problems created by difference score unreliability. French, Rogers and Cobb (1974), for example, dichotomized responses into two categories and then subtracted the items. Kiyak (1977, cited in Carp, Carp and Millsap, 1982) used three categories, cross-tabulated the individual variables, and designated those located on the diagonal of the resulting nine-cell matrix as congruent with respect to the criterion

Table 14

Stability Coefficients for Perceptions of Own, Aspired and Expected Life Situations

	Minimum N	1977 - 1979	1979 - 1981	1977 - 1981
Own life	995	.46	.50	.39
Life expect	969	.39[a]	.40[b]	.33[c]
Life aspire to	1001	.30[d]	.43	.30[d]

a. Correlation between life expect in 5 years' time (1977) and life expect in 2 years' time (1979)
b. Correlation between life expect in 2 years' time (1979) and best life could ever expect to have (1981)
c. Correlation between life expect in 5 years' time (1977) and best life could ever expect to have (1981)
d. Correlation between best life could ever hope to have (1977) and best life could ever expect to have (1979,1981)

Table 15

Perceptions of Attainment: Estimated Difference Score Reliabilities[1]

Survey	Arbitrary Component Reliability	Difference Score Reliability: Own life -Expect	Own life -Aspire	Own Eco. -Expect	Own Eco. -Aspire
1977	.55	...	.25	...	.32
	.70	.17	.50	.14	.55
	.85	.58	.75	.57	.77
1979	.55	...	.17	...	...
	.70	.12	.14	...	...
	.85	.56	.72	...	...
1981	.55	...	.08	...	...
	.70	...	.39	...	...
	.85	...	.69	...	...

1. The component reliability values are arbitrary; other values have been taken from the relevant sample data. The equation on which these estimates are based is:

$$r_{(a-b)(a-b)} = \frac{r_{aa} + r_{bb}\ /2 - r_{ab}}{1 - r_{ab}}$$

This equation assumes $s_1 = s_2$ (Cohen and Cohen, 1975:64).

being measured. Carp and Carp (1982) averaged out difference scores across thirteen domains of life (health, income, housing, etc.) to create one predictor. Finally, Kahana, Liang and Felton (1980) used modified difference scores. In their analyses, raw scores were converted into standard z-scores before being subtracted.

None of these techniques, however, adequately resolves the problem. The use of nominal level measurements results in considerable reduction in the power of the variables. The use of standardized scores, in turn, does little to alleviate problems which result from correlated component variables (Carp, Carp and Millsap, 1982).

To deal with problems of unreliability as well as those initiated by the likely correlation between the component and outcome measures,[8] this study initially relied on the use of residual scores to measure perceptions of attainment considered relative to both aspirations and expectations. Regression equations representing the least-squares lines of best fit were used to predict the respondents' perceptions of their own, current life (and economic) situations (i.e., their "predicted

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[8] The use of raw difference scores also results in a situation where the outcome measure (in this case, perceptions of attainment relative to aspirations and expectations) is contaminated and contains some of the variance due entirely to the respondents' levels of aspiration and expectation (see Cohen and Cohen, 1975). The intent behind using a difference score is to subtract (remove) aspirations (or expectations) from perceptions regarding one's own situation and thereby produce a measure which only reflects the difference between them and is therefore independent of how high or low aspirations or expectations actually are. This is analogous to the situation in which measurements taken at one point in time are subtracted from measurements taken at an earlier point in time in order to assess change. The amount of change observed is likely to reflect, at least in part, the initial levels observed (see Bohrnstedt, 1969; Cohen and Cohen, 1975; Cronbach and Furby, 1970; Fenwick and Barresi, 1981; and Pendleton et al., 1979 for further discussions of this issue).

attainments") on the basis of their perceptions regarding the life (or economic) situations which they expected to have (in two or five years' time) and, in separate analyses, those which they aspired to have. These "predicted attainment" scores were then subtracted from their "actual attainments" (i.e., the respondents' perceptions of their own current situations).

Residualization removes correlated measurement error (leaving only random measurement error). Consequently, the residual variables produced using this procedure are, by design, linearly unrelated to levels of aspiration and expectation.[9] They indicate degrees of both over- and under-attainment relative to aspirations or expectations (see Turner and Gartrell, 1978 for an identical procedure used to derive a measure of social competence).

Unfortunately, however, for our purposes here, the residual variables created using this procedure were virtually indistinguishable from one another - i.e., perceptions of attainment considered relative to aspirations emerged as being almost identical to perceptions of attainment considered relative to expectations as well as to perceptions of relative deprivation and justice (to be discussed later). This was so because relationships between the component variables (one's own situation and that aspired to, etc.) were relatively weak. Aspirations accounted for only about 12 percent of the variance in perceptions of one's own situation. As a result, the scores obtained before and after taking this variable into account differed very little. It was therefore decided to

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[9] In this way, residualization is equivalent to the use of semipartial or part correlations (see Turner and Gartrell, 1978).

make use of the difference score measures, but recognizing the problems introduced, particularly with regard to the measure of perceived attainment relative to expectations.

Frequency distributions for these measures are reported in Tables 16 and 17. More positive scores signify situations in which currently perceived attainments fall short of those predicted; that is, instances where aspirations (Table 16) or expectations (Table 17) exceed current assessments. More negative scores indicate situations where current attainments are considered high relative to predicted attainments and therefore, situations in which respondents' aspirations and/or expectations for the future tend to be lower than current assessments. Scores at or near the mean (i.e., zero) reflect relative congruence between current attainments and those expected on the basis of aspirations or expectations.

The predominant pattern is for respondents to have aspirations as well as expectations which either exceed or are relatively consistent with current assessments of well-being. In terms of perceptions of attainment considered relative to aspirations, for example, the average score ranges from approximately 1.4 to 2.3. From 69 percent (1979 - life aspirations) to 77 percent (1977 - economic aspirations) of the respondents surveyed indicated that they hoped for improvement in the future. Approximately one-quarter (22 percent to 30 percent) felt their current situations were as good as they could possibly ever hope to attain.

Somewhat less variation is evident with regard to perceptions of attainment considered relative to expectations. From 36.2 percent (1977 - five year economic expectations) to 55.2 percent (1979 - two year life

Table 16

Frequency Distributions: Perceptions of Attainment Relative to Aspirations

Scores	1977 Economic N	1977 Economic %	1977 Life N	1977 Life %	1979 Life N	1979 Life %	1981 Life N	1981 Life %
< -1.00	13	0.7	40	2.1	25	1.5	22	1.3
0.00	409	21.9	547	29.0	508	30.0	492	28.3
1.00	281	15.0	396	21.0	437	25.8	483	27.7
2.00	417	22.3	421	22.3	395	23.3	454	26.1
3.00	312	16.7	258	13.7	176	10.4	157	9.0
4.00	179	9.6	122	6.5	79	4.7	62	3.6
5.00	122	6.5	62	3.3	43	2.5	45	2.6
> 6.00	136	7.3	39	2.1	29	1.7	24	1.4
Total	1869	100.0	1885	100.0	1693	100.0	1741	100.0
$\bar{x}$		2.3		1.6		1.4		1.4
S.D.		2.1		1.7		1.6		1.4

Table 17

Frequency Distributions: Perceptions of Attainment Relative to Expectations

Scores	1977 Economic N	1977 Economic %	1977 Life N	1977 Life %	1979 Life N	1979 Life %
< -1.00	204	11.2	190	10.4	113	6.7
0.00	661	36.2	832	45.3	923	55.2
1.00	418	22.9	403	22.0	329	19.7
2.00	318	17.4	213	11.6	188	11.2
3.00	120	6.6	125	6.8	74	4.4
> 4.00	107	5.8	72	3.9	46	2.7
Total	1828	100.0	1835	100.0	1673	100.0
$\bar{x}$		0.9		0.6		0.6
S.D.		1.7		1.5		1.4

situation expectations) of the respondents perceive relative congruence as being evident between their current attainments and those expected in the near or foreseeable future. From 38.0 percent (1979 - two year life expectations) to 52.7 percent (1977 - five year economic expectations) expect improvement, while 6.7 percent (1979 - two year life expectations) to 11.2 percent (1977 - five year life expectations) expect declines in the future.

c. Perceptions of Relative Deprivation

In none of the three surveys were respondents asked directly to compare their own situations with those of others. As a result, the concept of relative deprivation is once again operationalized on the basis of questions derived from the Cantril (1965) scale. As noted, in each of the three surveys, respondents were shown a diagram of a ladder containing eleven steps. In addition to being asked where they would place their own current life situations on this ladder, they were asked to indicate where they would place "the life of the average person living in Canada". In the 1977 survey, respondents were also asked these questions regarding their economic situations in particular.

The use of discrepancies between the respondents' evaluations of their own situations and those assigned to the average Canadian to measure perceived deprivation relative to others introduces a number of conceptual and methodological problems. At the conceptual level, there is the possibility that imposing a predefined reference group (i.e., the average person living in Canada) may not elicit the respondents' true feelings of

relative deprivation since this group does not represent an important standard of comparison actually used by the respondents. This is particularly so given the importance attributed to comparisons with age peers in literature in this area.

Although it would have been desirable to have the respondents define their own reference group(s) and/or to compare responses based on a number of different groups including age peers, this is not possible using these data. However, previous findings suggest that perceptions of relative deprivation tend to be limited by the fact that comparative reference groups tend to be spontaneously selected from those whose situations (e.g., social class) approximate those of the respondents (Runcimann, 1966). This is so whether comparative reference groups are suggested by the investigator or are chosen by the respondents themselves (see Liang and Fairchild, 1979; Runcimann, 1966). To the extent that this is the case, the use of the average person living in Canada for purposes of comparison appears to provide a reasonable measure of perceived deprivation relative to others.

Methodologically, problems of reliability (i.e., of the difference score measure and its contamination by variance associated with the actual ratings given by respondents to the situations of the average Canadian) are once again apparent. However, the correlations evident between respondents' ratings of their own situations and those applied to most Canadians are found to be modest in comparison with the correlations reported for the earlier measures (see Table 18). This likely reflects the more objective, less personal nature of others as a standard of comparison for evaluating one's own situation. The fact that the

Table 18

Standard Deviations, Zero-Order Correlations and Stability Coefficients for Perceptions of Own Situation and of Average Canadian: 1977, 1979, 1981

Sample	Minimum N	Own Life	Avg. Cdn.	Own Economic	Avg. Cdn. Economic
A. Standard Deviation:					
1977	1884	1.72	1.42	1.94	1.44
1979	1670	1.66	1.41	...	...
1981	1708	1.59	1.37	...	...
B. Correlation with Own:					
1977	1884	...	.15	...	.12
1979	1656	...	.20	...	...
1981	1708	...	.25	...	...
C. Stability Coefficients:					
1977-79	973	.46	.25	...	...
1979-81	973	.50	.31	...	...
1977-81	979	.39	.22	...	...

correlations are low suggests that difference scores which measure perceptions of deprivation relative to others are likely to be less vulnerable to unreliability as a result of correlated component variables than are those used to assess perceptions of attainment relative to aspirations or expectations. This is borne out by the estimates of reliability reported in Table 19. Therefore, given the problems previously noted regarding the use of residual measures, difference scores are once again employed.

Higher (or more positive) scores denote situations in which the respondents' assessments of the situations of others are better than those assigned to their own situations. In turn, lower scores result when respondents' assessments of their own situations are high relative to their assessments of the situation of average Canadians. Congruent responses, or those in which respondents perceive similarity between their own situations and those of most others, are evident at zero.

Table 20 presents the distribution of responses for these measures. If scores lower than one point either above or below the mean (i.e., between -1.00 and 1.00) are taken to reflect perceptions of relative congruence between one's own situation and those of others (i.e., the average Canadian), then 45.8 percent of the sample views their economic situations as being similar to those of the average Canadian (1977). Over one third of the respondents (39.9 percent) perceive themselves as economically advantaged, and less than one sixth (14.4 percent) consider themselves to be at least somewhat economically deprived relative to most other Canadians. In terms of their overall life situations, 40.1 percent (1977) to 51.0 percent (1979) perceive a

Table 19

Perceptions of Relative Deprivation: Estimated Difference Score Reliabilities

Sample	Arbitrary Component Reliabilities	Difference Score Reliability: Own Life - Avg. Cdn.	Difference Score Reliability: Own Econ. - Avg. Cdn
1977	.55	.47	.49
	.70	.65	.66
	.85	.82	.83
1979	.55	.44	...
	.70	.63	...
	.85	.81	...
1981	.55	.40	...
	.70	.60	...
	.85	.80	...

Table 20

Frequency Distributions: Perceptions of Relative Deprivation

Scores	1977 Economic N	1977 Economic %	1977 Life N	1977 Life %	1979 Life N	1979 Life %	1981 Life N	1981 Life %
< -5.00	62	3.4	117	6.3	46	2.8	53	3.1
-4.00	87	4.8	158	8.5	87	5.3	87	5.1
-3.00	215	11.8	248	13.4	201	12.2	251	14.7
-2.00	362	19.9	442	23.9	357	21.6	433	25.4
-1.00	318	17.5	302	16.3	302	18.3	364	21.3
0.00	336	18.5	324	17.5	453	27.4	309	18.1
1.00	178	9.8	117	6.3	87	5.3	102	6.0
2.00	109	6.0	67	3.6	56	3.4	55	3.2
> 3.00	153	8.4	74	4.0	64	3.9	53	3.1
Total	1820	100.0	1849	100.0	1653	100.0	1707	100.0
$\bar{x}$		-0.8		-1.4		-1.4		-1.3
S.D.		2.3		2.1		1.6		1.8

similarity between themselves and the average Canadian; 41.9 percent (1979) to 52.1 percent (1977) perceive themselves as relatively advantaged; and 6.3 percent (1981) to 7.6 percent (1977) perceived themselves as relatively deprived.

d. Perceptions of Distributive Justice

In order to assess the impact of perceptions of justice or fairness on relationships between objective and subjective well-being, questions derived from the Cantril (1965) scale are once again used. In each survey, respondents were asked to indicate in what position on the ladder they would place the lives (1977, 1979, 1981) and economic situations (1977) which they felt they deserved to have. Given the problems associated with using residual scores to adequately measure this concept, differences between these ratings and those assigned by the respondents to their own current situations are once again used (also see Tables 21 and 22).

The result is a measure revealing degrees of over- and under-attainment relative to perceptions of justice or fairness. More positive scores indicate situations in which respondents perceive their own current situations as disadvantaged relative to what they feel they deserve to have. In contrast, negative scores signal respondents who perceive their current situations positively considered relative to what they feel they deserve to have.

Frequencies are provided in Table 23. As was the case with regard to both perceptions of attainment and perceptions of relative deprivation,

Table 21

Standard Deviations, Zero-Order Correlations and Stability Coefficients for Perceptions of Own Situation and of Situation Deserved: 1977, 1979, 1981

Sample	Minimum N	Own Life	Life Deserve	Own Economic	Economic Deserve
A. Standard Deviation:					
1977	1870	1.72	1.54	1.93	1.57
1979	1694	1.66	1.34	...	...
1981	1729	1.59	1.31	...	...
B. Correlation with Own:					
1977	1860	...	.43	...	.36
1979	1679	...	.40	...	...
1981	1729	...	.42	...	...
C. Stability Coefficients:					
1977-79	982	.46	.26	...	...
1979-81	988	.50	.39	...	...
1977-81	988	.39	.27	...	...

Table 22

Perceptions of Distributive Justice: Estimated Difference Score Reliabilities

Sample	Arbitrary Component Reliabilities	Difference Score Reliability: Own Life - Deserved	Difference Score Reliability: Own Econ. - Deserved
1977	.55	.21	.30
	.70	.47	.53
	.85	.74	.77
1979	.55	.25	...
	.70	.50	...
	.85	.75	...
1981	.55	.22	...
	.70	.48	...
	.85	.74	...

Table 23

Frequency Distributions: Perceptions of Distributive Justice

Scores	1977 Economic N	1977 Economic %	1977 Life N	1977 Life %	1979 Life N	1979 Life %	1981 Life N	1981 Life %
< -2.00	27	1.4	49	2.6	38	2.3	35	2.0
-1.00	33	1.8	79	4.2	51	3.0	32	1.8
0.00	693	37.3	917	49.0	789	46.9	794	45.9
1.00	285	15.3	272	14.5	302	17.9	311	18.0
2.00	292	15.7	245	13.1	235	14.0	276	16.0
3.00	226	12.2	159	8.5	136	8.1	157	9.1
4.00	133	7.1	76	4.1	73	4.3	60	3.5
5.00	78	4.2	41	2.2	31	1.8	44	2.5
> 6.00	92	4.9	32	1.7	27	1.6	20	1.2
Total	1859	100.0	1870	100.0	1682	100.0	1729	100.0
$\bar{x}$		1.6		0.9		1.0		1.0
S.D.		2.0		1.7		1.7		1.6

the majority of respondents in each sample perceive their current situations as being relatively congruent with what they feel they are entitled to have: as expected, over 50 percent of the respondents in each sample have scores ranging from -1.00 to 1.00. Very few respondents have scores which indicate perceived advantage with reference to justice considerations whereas a far greater number have scores reflecting relative disadvantage.

e. Perceptions of Internal Control:

According to the literature, the main factor which differentiates among those with an internal as opposed to an external control orientation is the extent to which individuals believe their own actions or characteristics are responsible for producing certain outcomes rather than viewing outcomes as the product of fate, chance, powerful others and other factors over which they exercise little or no control (see Gurin, Gurin and Morrison, 1978; Rotter, 1966; Varghese and Medinger, 1979).

A number of items in each survey (included as part of the Personal Competence (Efficacy) Index originally developed by Douvan and Walker, 1956 - also see Campbell, Converse and Rodgers, 1976; Gurin, Gurin and Morrison, 1978) appeared to reflect this conceptual distinction. According to Campbell, Converse and Rodgers, (1976:59), personal competence refers to "the extent to which a person feels he is in control of his life, rather than subject to control by external forces...". Similarly, Gurin, Gurin and Morrison (1978) note that both conceptually and empirically, the concept of efficacy converges with that of internal

control. These investigators report moderately strong and statistically significant correlations (ranging from .32 to .46) between individual items included within the Personal Efficacy Index and the Rotter (1966) I-E scale as well as between the index and the Rotter scale as a whole (r = .45). A somewhat higher correlation (r = .52) was found between the personal competence/efficacy index and the internal control dimension derived from the I-E scale.[10]

For the analyses reported here, two somewhat different versions of the personal efficacy index are employed. The first is used in analyses of data obtained from the 1977 and 1979 surveys and combines responses to the first four (of five) questions outlined below. The second, used in analyses of the 1981 data, combines all five of the following items:

1) "Do you think it's better to plan your life a good way ahead or, would you say life is too much a matter of luck to plan ahead very far?";

2) "When you make plans ahead, do you usually get to carry out things the way you expected, or do things usually come up to make you change your plans?";

3) "Have you usually felt pretty sure your life would work out the way you want it to, or have there been times when you haven't been sure about it?";

---

[10] Unlike the Rotter scale, the Personal Efficacy Index does not measure individuals' beliefs about the importance of internal and external forces in the process of reward distribution within society (i.e., control ideology - see Gurin, Gurin, and Morrison, 1978).

4) "Some people feel they can run their own lives pretty much the way they want to, others feel the problems of life are sometimes too big for them. Which are you most like?"; and

5) " Do you think that luck or chance plays an important role in your life or that what happens to you is your own doing?".

More internal or efficacious responses were assigned a score of three and more external or less efficacious responses received a score of one. Those respondents who responded with "don't know" were assigned an intermediate score.

The proportion of low efficacy responses ranges from 17.6 percent to 58.2 percent across the items used in 1977; from 17.2 percent to 63.7 percent in 1979; and from 19.2 percent to 65.0 percent in 1981. In all cases, the item receiving the highest proportion of responses indicating low levels of personal efficacy or control is item 3, referring to confidence in the fact that life would work out as desired. Most respondents indicated they haven't always been sure this would be the case. The item which, in all cases, received the lowest proportion of responses indicative of low personal control was that dealing with people's perceived capacity to run their own lives. A minority of those surveyed indicated that they felt the problems of life were sometimes too big to handle.

To construct indices reflecting internal control, scores for the individual items were standardized and then summed. The inter-item correlations yield reliability coefficients (alpha) of .49 (1977), .53 (1979), and .57 (1981). These are low and in fact, are lower than those reported by Fisher (1973) who reports a coefficient of .64 for an

identically constructed measure using a national sample of American adults. There is little that can be done to improve the reliability of this measure. As a consequence, it is necessary to make use of it despite problematic reliability. It should be noted, however, that unreliability of measurement is likely to mitigate against obtaining significant relationships. The distribution of responses is reported in Table 24.

f. Objective Well-Being:

Two indicators of the independent variable - objective well-being - are included in the study: economic status and health.

Economic Status:

Objective economic status is operationalized on the basis of reported total family income corrected for differences in family size. Family income rather than individual income is used because it is felt to more accurately reflect the economic resources individuals have at hand. It includes recognition of the command that an unemployed family member has over economic resources and also, the resources of women working primarily or exclusively in the home. In terms of age, the use of this measure results in dividing the incomes of the young more so than those who are older since elderly individuals are more likely to have families consisting of only one or two persons whereas those who are younger more frequently have families of three or more. However, this is offset somewhat by the fact that the young are more likely to have two sources of income.

Table 24

Frequency Distributions: Perceptions of Internal Control
1977, 1979, 1981

Score	1977 N	1977 %	1979 N	1979 %	1981 N	1981 %
-7.00 - -5.00	...	..	...	..	92	5.4
-4.99 - -3.00	173	9.1	172	10.1	235	13.8
-2.99 - -1.00	420	22.2	373	21.9	358	21.0
-0.99 - 1.00	542	28.7	510	30.0	419	24.6
1.01 - 3.00	471	24.9	402	23.6	357	21.0
3.01 - 5.00	285	15.1	245	14.4	240	14.1
Total	1891	100.0	1702	100.0	1701	99.9
$\bar{x}$		.0		-.0		-.0
S.D.		2.5		2.6		3.0

For data obtained from the 1977 survey, family income levels were obtained from responses to a single question asking respondents to indicate their total family incomes (prior to taxes) for 1976. Responses were coded into eighteen categories ranging from a low of (1) indicating no family income to a high of (18) indicating a family income of $100,000. and over. In order to take differences of family size into account, family income levels set to the midpoint of each of the categories were divided by family size (i.e., the number of family members residing in the household). For those who reported family income levels of $100,000. or over, values of $100,000. were assigned prior to the division. Such truncation reduces the likelihood of skewness in the distribution associated with a minority of outliers.

For data obtained from surveys conducted in 1979 and 1981, it was necessary to calculate total family income levels from responses to nine separate items requesting information about different earners and sources of income. In each case, income was coded categorically. Therefore, in order to facilitate summation, respondents were once again assigned income levels corresponding to the midpoint of the relevant categories. For those at the highest income levels (i.e., $100,000. or more), values of $100,000. were assigned.

Health Status:

The problems associated with seeking suitable conceptual and operational definitions of health are well-documented (Stahl and Rupp Feller, 1990). Health can be defined in a number of different ways and can refer to various combinations of physical, psychological, and social

Table 25

Frequency Distributions: Economic Status

Income	1977 N	1977 %	1979 N	1979 %	1981 N	1981 %
< $3999	725	42.7	549	33.0	330	19.4
$4000 - $5999	361	21.3	293	17.6	284	16.7
$6000 - $7999	262	15.4	253	15.2	251	14.7
$8000 - $9999	108	6.4	197	11.8	223	13.1
> $10000	242	14.2	373	22.4	615	36.1
Total	1698	100.0	1665	100.0	1703	100.0

well-being (Chappell, 1981; Myles, 1977). Typically, the problems initiated by attempts to define and measure the concept have resulted in the conclusion that health is equivalent to a lack of illness or disease. Yet, as generally acknowledged, health implies more than the mere absence of illness or disease. Of particular importance, for example, appears to be the degree of functional impairment or disability imposed by the condition. Defined by Ernst and Ernst (1984:10) as "the maximum output or ability of the individual to perform natural and expected activities within the framework of environmental circumstances", functional disability draws attention to the behavioural consequences of illness and disease as reflections of operative health status.

For purposes of these analyses, health status is defined as the absence of illness and serious functional impairment. The selection of appropriate indicators is based on their availability within the data sets. Consequently, the measures used are somewhat less than ideal, containing significant measurement error. For analyses of data collected in 1977, the following indicators are used:

(a) number of days ill: Respondents were asked to indicate whether or not they had been sick during the past six months and, if so, how many days they had been bothered by illness.

(b) number of chronic conditions: Respondents were asked whether they had any long standing health trouble or physical disability and, if so, what types of problems they had (e.g., heart problems, cancer, arthritis, stomach ulcers). They were assigned a score consistent with the number

of chronic conditions indicated.

For analyses of data collected in 1979 and 1981, available measures include:

(a) the frequency of acute illness: Respondents were given a list of physiological symptoms of illness (including colds or flu, aches and pains in muscles or joints, and feeling generally run down) and were asked how often (quite a lot, a little, or not at all) they had experienced such symptoms during the last six months.

(b) functional health: Respondents were asked whether they suffered from any long standing illness, disability, effects of injury or weakness; the number (up to three) and nature of these problems; whether these conditions resulted in restrictions of their working capacity or normal daily activities; and whether these were minor inconveniences or major restrictions. Responses to these items were combined and scores assigned as follows:

1. two or more problems imposing major restrictions;
2. one problem imposing major restrictions;
3. two or more problems imposing minor restrictions;
4. one problem imposing minor restrictions;
5. two or more problems imposing no restrictions;
6. one problem imposing no restrictions; and
7. no problems

In general, respondents reported relatively good levels of health: 76.3 percent (1977) reported experiencing no illness during the six month period prior to the study. In terms of the acute illness conditions included in the 1979 and 1981 data, the vast majority (85.7 percent in 1979 and 84.1 percent in 1981) of respondents reported being either "not at all" or only "a little" adversely affected by these conditions over the previous six months.

In 1977, 69.5 percent of respondents reported having no chronic conditions while 25.6 percent reported having one such problem and 4.8 percent reported having two or more. Similarly, 70.6 percent of those in the 1979 sample and 67.8 percent of those in the 1981 sample reported no long standing health problems or disabilities. In 1979, 19.2 percent reported having one such condition in contrast with 23.2 percent in 1981. Approximately 10 percent (10.2 percent in 1979 and 8.9 percent in 1981) reported having two or more long standing health problems (see Table 26).

g. Control Variables

The control variables include gender, education, and marital status. To measure education, respondents were asked to indicate the highest level of education which they had completed. Responses ranged from a low of (1) no schooling to a high of (10) indicating a professional degree or doctorate.

Where necessary, gender and marital status are included in the analyses as dummy variables (female=1 and married=1).

Table 26

Frequency Distributions: Health Status

A. 1977	N	%
1. Number of days ill:		
31 or more	167	8.8
8 to 30	172	9.0
1 to 7	111	5.8
0	1446	76.3
2. Number of chronic conditions:		
2 or more	91	4.8
1	487	25.6
0	1320	69.5

	1979		1981	
B. 1979, 1981	N	%	N	%
3. Acute conditions:				
1.00 (high)	28	1.6	30	1.7
1.33	63	3.6	75	4.3
1.67	156	9.0	173	9.9
2.00	302	17.5	342	19.6
2.33	451	26.1	435	24.9
2.67	436	25.2	440	25.2
3.00 (low)	293	17.0	252	14.4
4. Chronic disability:				
1 (high)	86	5.1	64	3.7
2	97	5.7	103	5.9
3	46	2.7	56	3.2
4	99	5.8	121	7.0
5	42	2.5	35	2.0
6	130	7.6	178	10.3
7 (low)	1200	70.6	1177	67.8

Table 27

Sample Characteristics - 1977, 1979, 1981 (%'s)

Characteristics	1977	1979	1981
Region:			
Atlantic	9.4%	10.1%	10.8%
Quebec	25.4	24.2	24.7
Ontario	36.7	37.5	38.2
Prairies	17.8	17.4	16.8
B.C.	10.8	10.8	9.5
Age:			
35 - 49	44.5	44.3	43.6
50 - 64	36.3	36.2	36.0
65 - 74	13.2	13.5	14.7
75 +	6.0	6.1	5.7
Gender:			
Male	49.9	46.8	48.3
Female	50.1	53.2	51.7
Education:			
Grade 9 or less	30.8	30.9	
Grade 10 - 11	25.9	27.3	
Grade 12 (13)	17.9	14.4	n.a
Some univ/technical	17.3	18.5	
Univ. degree	8.1	8.9	
Employment:			
Employed (ft/pt)	53.3	54.1	57.2
Not employed	46.7	45.9	42.8
Marital Status:			
Single	4.8	4.5	5.1
Married	84.6	83.3	81.6
Widowed	8.6	9.7	9.5
Divorced	2.0	2.5	3.7
Country of birth:			
Canada	76.2	76.6	n.a
Other	23.8	23.4	
Ethnicity:			
British Isles	44.8	44.3	
French	25.7	24.6	n.a
Other	29.5	31.1	

n.a. = not available

3. Sample Characteristics

The characteristics of those in each of the three samples included in the analyses are reported in Table 27. Over 60 percent of those surveyed reside in the provinces of Ontario and Quebec; less than 20 percent live in the prairie provinces including Manitoba, Saskatchewan, and Alberta; and about 10 percent live in both British Columbia and the Atlantic Provinces (New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland). The vast majority of respondents (approximately 80 percent) are under 65 years of age and just under half are male. In terms of education, about 30 percent have the equivalent of grade nine or less; over 40 percent have grades ten to twelve (thirteen in Ontario); and over one quarter have completed at least some university or technical training beyond the high school level. Most respondents are employed. In addition, the vast majority (over 80 percent) are married. About three quarters are Canadian born.

4. Procedures for Data Analysis

The major focus of this investigation concerns relationships between objective and subjective well-being as these vary in association with age. In particular, it examines whether, as expected on the basis of previous research, older adults maintain better subjective well-being than younger individuals despite worse objective conditions; whether relationships between objective and subjective dimensions of well-being vary by age group and the extent to which this can be attributed to

differences in perceptions of attainment (relative to aspirations or expectations); perceptions of deprivation relative to others; perceptions of distributive justice; and perceptions of personal efficacy or control.

In order to assess the accommodation and false consciousness models and thus, the effects of perceptions of relative deprivation, distributive justice, attainment, and control on age-differentiated relationships between objective and subjective well-being, cohort-based regression analyses are employed. Three age groups are examined - those aged 35 - 49, 50 - 64, and 65 and over. Initially, analyses are conducted comparing mean levels of objective and subjective well-being among the three age groups in order to determine whether or not the data support the frequently reported anomaly indicating greater subjective but worse objective well-being among older than middle-aged or younger adults. These aggregate level analyses are then supplemented with individual level analyses focusing on the straightforward relationship between objective and subjective well-being using age group as a covariate. This is done to determine whether age group differences exist with regard to the impact of objective conditions on subjective well-being - i.e., the rate at which objective becomes translated into subjective well-being.

Various control variables are then entered into the analyses in order to assess their effects on the relationships observed. Finally, each perceptual factor (grouped into three categories) is included as a second covariate in order to permit an assessment of its impact on the relationships previously observed and thereby, to determine relative support for the accommodation and false consciousness models.

Separate analyses are conducted for the relationships between

income and subjective assessments of economic well-being; health and assessments of health; and finally, income, health and overall assessments of subjective well-being. In all cases, analyses are conducted using the 1977 data first and are then replicated using the other two data sets.

Chapter III

FINDINGS

1. Income and Perceived Economic Well-Being

Previous research findings suggest that older adults have lower levels of income but higher levels of subjective economic well-being than do those in younger age groups. Table 28 reports the results of comparisons made of the average levels of income and subjective economic well-being across three age groups: those aged 35 to 49; 50 to 64; and 65 and older. These analyses support such findings at the aggregate level: in each of the three different data sets examined, those aged 65 and over not only have the lowest average incomes but also, the highest average subjective assessments of economic well-being of the three age groups. The average amount of variance evident in levels of subjective well-being is also greatest within the older age group, suggesting a greater differentiation of responses among older adults as a group than among those middle-aged or younger.

According to the accommodation model, differences involving objective and subjective well-being among the different age groups reflect the greater coping abilities of older individuals and consequently, their lesser vulnerability to the negative impact of poor objective conditions. In contrast, the false consciousness model suggests that, regardless of objective circumstances, older adults assess their situations more positively.

Table 28

Oneway Analysis of Variance: Income and Subjective Economic Well-Being by Age Group - 1977, 1979, 1981

Sample: Variable	N	$\bar{x}$	S.D.	F*
1977:				
Income				
35 - 49	774	6029.33	5116.60	10.73
50 - 64	606	6858.55	5594.62	
65 +	316	5147.99	5862.43	
Subjective Economic Well-Being				
35 - 49	845	58.95	31.87	8.70
50 - 64	686	62.79	34.73	
65 +	359	67.62	35.27	
1979:				
Income				
35 - 49	752	7575.19	6262.90	17.79
50 - 64	605	8667.62	8178.34	
65 +	307	5745.34	6193.69	
Subjective Economic Well-Being				
35 - 49	765	62.82	27.61	11.16
50 - 64	626	65.05	28.51	
65 +	336	71.67	31.35	
1981:				
Income				
35 - 49	749	9666.50	8227.87	17.51
50 - 64	608	11877.28	11698.77	
65 +	344	8230.47	8432.24	
Subjective Economic Well-Being				
35 - 49	758	58.47	27.26	20.62
50 - 64	628	63.30	27.82	
65 +	356	70.14	32.12	

*$p < .001$

In order to examine age group differences in the impact of objective economic conditions (income) on subjective assessments of economic well-being at the individual level, subjective well-being was initially regressed on income deciles within each of the three data sets. The results are reported in Table 29. They suggest the effects of income on subjective perceptions of well-being can usefully be examined in terms of three relatively broad categories corresponding to those with comparatively low (deciles 1 to 3), moderate (deciles 4 to 6), and high (deciles 7 to 10) levels of income within each of the three data sets.

Table 30 presents the mean levels of economic well-being that result from the simple regression of subjective economic well-being on income groupings (using dummy variable techniques) with age group as a covariate (see Tables 30a:b in Appendix A for the regression equations). In sharp contrast with the findings obtained using the aggregate data, these findings indicate that assessments of subjective economic well-being increase with increasing levels of income within every age group within all three samples. In each of the three different samples, income alone explains from 3 to 12 percent of the overall variance in subjective assessments of economic well-being. This is a relatively modest degree of accuracy in prediction, perhaps reflecting the difficulties associated with obtaining accurate income information as well as the fact that objective economic conditions and income may be only loosely related.

Findings indicating that objective and subjective economic well-being are positively related in all age groups including the elderly, suggest an isomorphism between objective and subjective economic conditions. They further suggest that counter-intuitive and anomalous

Table 29

Regression of Subjective Economic Well-Being in Income Deciles - 1977, 1979, 1981

Income Deciles	1977 b	1977 beta	1979 b	1979 beta	1981 b	1981 beta
1	-36.38	-.33	-24.26	-.26	-28.98	-.30
2	-25.73	-.24	-23.73	-.24	-19.79	-.20
3	-26.80	-.24	-22.96	-.24	-28.22	-.25
4	-19.98	-.18	-17.62	-.19	-20.32	-.24
5	-16.78	-.13	-18.14	-.19	-15.67	-.16
6	-14.80	-.14	-17.73	-.18	-17.41	-.18
7	-8.92	-.08	-15.40	-.16	-11.27	-.12
8	-9.49	-.09	-11.34	-.12	-6.73	-.07
9	-8.82	-.08	-9.66	-.10	-5.66	-.06
a	78.89		80.80		77.82	
R^2(adj)		.09		.06		.09

Table 30

Mean Levels of Subjective Economic Well-Being by Income
with Age Group as a Covariate

Year	Income	Age Group 35 - 49	50 - 64	65+
1977:				
	low	46.38	44.71	61.13
	average	59.76	60.91	68.14
	high	69.86	73.25	77.49
1979:				
	low	56.11	54.21	62.90
	average	61.11	64.75	69.79
	high	68.80	71.54	82.98
1981:				
	low	45.80	51.16	62.59
	average	54.53	58.56	67.27
	high	69.27	72.00	80.98

findings regarding age-related differences in relationships between objective and subjective well-being frequently reported on the basis of aggregate level results may not be indicative of similar differences at the individual level.

Within levels of income, levels of subjective economic well-being also tend to increase with age, particularly from ages 50-64 to 65 and over. The differences are not large but rather, tend to be in the magnitude of one point or less on the overall scale. Nevertheless, they are consistent and statistically significant (see Table 30b, Appendix A).

However, while both age and income groups emerge as significant predictors of subjective economic well-being, interactions between them do not. No significant age-related differences are found in the impact that varying levels of income have on subjective economic well-being. The impact of objective economic well-being (income) on subjective well-being is similar regardless of age group: those aged 65 and over are no more or less responsive to the effects of income (objective economic well-being) than are those aged 35-49 or 50-64.

Since older adults, particularly those with lower incomes, are also more likely than those who are younger to be female, to be widowed, and to have lower levels of education, there is the possibility that these factors served to suppress the actual tendency of older adults with low incomes to assess their economic situations in particularly positive terms. Therefore, to determine whether similar findings would be obtained if factors (such as gender, education and marital status) known to be associated with both age and income as well as with subjective assessments of economic well-being were controlled for, the regression equations were

recalculated with these factors included. The findings, reported in terms of adjusted mean levels of well-being, are in Table 31 (also see Tables 31a:b, Appendix A).

For the most part, the inclusion of these variables has little effect. Consistent with the earlier analyses, the findings reveal a significant and positive relationship between income and subjective economic well-being within each age group. Gender, education, and marital status each exert some influence over subjective assessments of economic well-being. Although not predicted as part of the current study, the nature and extent of their influence varies somewhat by age. Like the elderly, women too appear to perceive greater economic security than men, particularly among those at the younger (35 to 49) and older (65 and over) ages. In contrast, being married emerges as important for increasing feelings of economic security primarily among those aged 50 through 64 and is considerably less important as a predictor of subjective economic well-being in the other two age groups. In general, increases in education appear to lead to enhanced feelings of economic security. However, its impact is inconsistent and, in a few instances, education actually emerges as having a slight negative effect. The reason for the contradictory nature of these findings is not clear.

Not unexpectedly, the findings once again reveal that not only do levels of economic well-being increase with increases in income but that within levels of income, subjective assessments of well-being also increase with increasing age: both income and age group (being 65 years of age or older) emerge as significant (Table 31b). Like the earlier findings as well, these analyses provide further indication that the

Table 31

Mean Levels of Subjective Economic Well-Being by Income, Adjusted for Controls, with Age Group as a Covariate

Sample	Income	Age Group 35 - 49	50 - 64	65+
1977:				
	low	37.90	43.39	65.88
	average	49.82	58.98	73.40
	high	59.24	73.52	83.05
1979:				
	low	43.45	42.20	56.80
	average	46.74	51.76	64.37
	high	54.72	56.48	77.53
1981:				
	low	32.48	33.40	63.55
	average	39.60	40.98	68.93
	high	53.44	52.82	87.45

differences in well-being among those aged 65 and over and those in the two younger age groups also persist despite differences in levels of income. In none of the analyses does the impact of income on subjective well-being vary significantly across the different age groups.

To this point, the analyses have confirmed age-related disparities between objective and subjective well-being at the aggregate level, revealing lower levels of objective economic security but higher levels of subjective economic well-being among older than younger respondents. At the individual level, however, these higher levels of subjective well-being were found at all levels of income, with no differences by age in the impact of income on subjective assessments of economic well-being.

Table 32 reports the means, standard deviations and zero-order correlations among the various explanatory (perceptual) variables implied within the accommodation and false consciousness models - i.e., perceptions of relative deprivation, distributive justice, attainment relative to aspirations and expectations, and personal efficacy or control. As noted previously (see page 38), the accommodation model tends to focus on the importance of perceptions of attainment and of personal efficacy or control whereas the false consciousness model emphasizes the importance of perceptions of relative deprivation and distributive justice. However, the real difference between the two models is not in the content of the perceptions that individuals are said to have but rather, in the relationships that exist among the perceptual variables, objective and subjective well-being. Consequently, in these analyses, the variables are considered to be interchangeable and are used to examine both models.

Table 32

Means, Standard Deviations and Zero-Order Correlations
Among Perceptual Indicators

		Relative Depriv.	Distrib. Justice	Attain. (Aspire)	Attain (Expect)	Personal Efficacy
Relativ Depriv.	1977					
	1979	1.00				
	1981					
Distrib. Justice	1977	.51(.63)				
	1979	.53	1.00			
	1981	.53				
Attain. (Aspir.)	1977	.52(.53)	.59(.62)			
	1979	.51	.59	1.00		
	1981	.48	.57			
Attain. (Expect)	1977	.32(.33)	.42(.40)	.48(.52)		
	1979	.34	.44	.60	1.00	
	1981	...	...	...		
Pers. Efficacy	1977	.29(.29)	.27(.27)	.23(.21)	.11(.09)	
	1979	.22	.23	.15	.07	1.00
	1981	.21	.23	.14	...	
Mean	1977	-1.42(-.74)	.93(1.62)	1.60(2.31)	.64(.85)	.00
	1979	-1.04	.99	1.45	.59	-.00
	1981	-1.30	1.04	1.41	...	-.02
S.D.	1977	2.11(2.3)	1.74(2.01)	1.71(2.06)	1.49(1.66)	2.53
	1979	1.99	1.67	1.55	1.36	2.58
	1981	1.82	1.58	1.42	...	3.03

As expected, the perceptual measures are significantly and positively correlated with one another. Individuals who perceive their situations (life/economic) positively when compared with others also tend to perceive their situations positively when compared with other standards including what they feel they deserve to have, what they expect to have in the future, and what they aspire to. They also tend toward somewhat more positive assessments of personal efficacy or control. However, in this latter case, the correlations are fairly low, perhaps reflecting the somewhat low reliability of this measure as well as its conceptual uniqueness.

In general, respondents perceive themselves as doing somewhat better than the average person living in Canada. However, there are no consistent differences evident across the age groups with regard to average levels of perceived relative deprivation (see Table 33). Despite the fact that respondents tend to perceive their situations positively when compared with others, on average they nevertheless also feel that they are not quite as well off (both economically and in general) as they deserve to be. In this case, significant age group differences do emerge: those in the two younger age groups (aged 35-49 and 50-64) perceive a significantly greater negative discrepancy between what they currently have and what they deserve to have than do those aged 65 and older. Even greater discrepancies are evident with regard to their perceptions of what they currently have and the best they could ever hope to have as well as between what they have and could expect to have in the near future. In both cases, those in the 65 and over age group perceive the least disparity of the three age groups. No consistent pattern of significant age group differences emerges, however, with regard to perceptions of

Table 33

Oneway Analyses of Variance: Perceptual Indicators
by Age Group - 1977, 1979, 1981

Sample Indicator	N	$\bar{x}$	S.D.	F
1977:				
Relative Deprivation (Economic)				
35 - 49	834	-.77	2.21	0.74
50 - 64	655	-.78	2.18	
65 +	330	-.61	2.50	
Distributive Justice (Economic)				
35 - 49	836	1.72	2.06	6.24**
50 - 64	678	1.67	1.99	
65 +	344	1.28	1.87	
Attainment Relative to Aspirations (Economic)				
35 - 49	839	2.84	1.96	69.25***
50 - 64	680	2.13	2.07	
65 +	350	1.39	1.90	
Attainment Relative to Expectations (Economic)				
35 - 49	825	1.41	1.58	105.23***
50 - 64	667	0.56	1.69	
65 +	336	0.06	1.29	
Personal Efficacy				
35 - 49	843	.06	2.48	0.45
50 - 64	686	-.06	2.50	
65 +	359	-.02	2.68	
1979:				
Relative Deprivation (Overall)				
35 - 49	745	-1.00	1.82	0.68
50 - 64	600	-1.09	2.00	
65 +	308	-1.03	2.11	
Distributive Justice (Overall)				
35 - 49	754	1.05	1.63	2.33
50 - 64	605	1.01	1.77	
65 +	319	.81	1.58	
Attainment Relative to Aspirations (Overall)				
35 - 49	756	1.81	1.52	49.56***
50 - 64	610	1.31	1.54	
65 +	324	.86	1.42	

Table 33 (continued)

Attainment Relative to Expectations (Overall)				
35 - 49	757	.91	1.38	57.68***
50 - 64	602	.50	1.37	
65 +	314	-.02	1.04	
Personal Efficacy				
35 - 49	754	.14	2.47	3.38*
50 - 64	622	-.21	2.62	
65 +	328	.06	2.72	
1981:				
Relative Deprivation (Overall)				
35 - 49	749	-1.24	1.78	3.63*
50 - 64	614	-1.46	1.84	
65 +	343	-1.17	1.83	
Distributive Justice (Overall)				
35 - 49	754	1.22	1.55	9.81***
50 - 64	619	.94	1.60	
65 +	353	.81	1.54	
Attainment Relative to Aspirations (Overall)				
35 - 49	758	1.79	1.44	58.72***
50 - 64	625	1.21	1.28	
65 +	356	.92	1.41	
Personal Efficacy				
35 - 49	741	.04	2.97	1.82
50 - 64	614	.06	3.06	
65 +	341	-.30	3.12	

***p<.001; **p<.01; *p<.05

personal efficacy or control.

The differences in the perceptions that those in the different age groups appear to have regarding the 'relative' merit of their (economic/overall life) situations can be traced in part to differences in their levels of aspiration and expectation as well as to what they feel they themselves deserve to have. Analyses conducted using data from the 1977 survey indicate that, in comparison with those aged 35 to 49 and 50 to 64, respondents aged 65 and over have significantly lower aspirations and expectations for the future and assign significantly lower rankings to the financial situations they feel they deserve to have. In contrast, however, they assign somewhat higher average rankings to the financial situation of the average person living in Canada (see Table 34).

According to the accommodation model with accommodation (reflected in a lack of perceived disparity between current circumstances and aspirations or expectations as well as in lower levels of personal efficacy, etc.) treated as a form of coping behaviour, individual perceptions and objective conditions interact to influence subjective assessments of well-being. In the false consciousness model, no such interaction effects are said to be present. Rather, according to this model, perceptual factors are seen to mediate the effects of objective on subjective well-being. Age acts as a modifier, influencing how objective conditions become translated into perceptions and thereby affect subjective assessments of well-being.

In order to assess what impact, if any, perceptions of relative deprivation, distributive justice, attainment and personal efficacy have on relationships between objective and subjective economic well-being

Table 34

Oneway Analysis of Variance: Economic Assessments
by Age Group - 1977

Indicator	N	$\bar{x}$	S.D.	F
1. Best financial situation ever hope to have:				
35 - 49	841	9.00	1.22	85.60***
50 - 64	680	8.31	1.75	
65 +	350	7.77	1.93	
2. Financial situation expected in 5 years:				
35 - 49	826	7.58	1.78	55.71***
50 - 64	667	6.73	2.07	
65 +	336	6.44	2.16	
3. Financial situation deserved right now:				
35 - 49	837	7.89	1.45	4.04*
50 - 64	679	7.85	1.56	
65 +	345	7.61	1.84	
4. Financial situation of the average Canadian:				
35 - 49	835	5.40	1.39	8.83***
50 - 64	655	5.39	1.41	
65 +	331	5.76	1.56	

***p<.001 *p<.01; *p<.05

among those in the three different age groups, these variables were introduced (individually) into the analyses as second covariates (along with age cohort). Two and three-way interactions involving age, perceptions, and objective well-being were therefore assessed in terms of their impact on subjective well-being. In each case, analyses were conducted comparing those across the three different age groups who perceived their situations as being comparatively worse, about the same, or better than (a) others; (b) deserved; (c) aspired to; (d) expected; and finally, (e) those who perceived their personal efficacy to be low, moderate, or high.[11] The results are reported in Tables 35 to 39 (and the overall regression equations in Tables 35a:b to 39a:b, Appendix A).

Table 35 (also see Tables 35a:b, Appendix A) reports the results of analyses conducted using perceived deprivation relative to others as a covariate. Increases in subjective well-being are primarily evident in conjunction with perceived standing relative to the average Canadian: as perceptions of relative standing increase, so too do subjective assessments of economic well-being. This is evident in all age groups and at all levels of income. Other predictors to emerge as significant include age and various interactions involving age, perceptions of relative deprivation, and income. Overall, these factors account for 15 percent (1979) to 27 percent (1977) of the variance in subjective assessments of economic well-being.

Prior to the introduction of perceptions of relative deprivation

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[11]. The subgroups were created so that as close as possible to one-third of the overall sample would fall within each of the three groups.

Table 35

Mean Levels of Subjective Economic Well-Being by Income, Adjusted for Controls, with Age Group and Perceived Deprivation as Covariates

Sample	Age Group and Perceived Deprivation								
	35 - 49			50 - 64			65+		
Income	W	S	B	W	S	B	W	S	B
1977:									
low	28.7	44.9	85.9	29.2	53.0	71.0	48.0	35.9	98.6
average	32.5	51.4	92.4	36.0	72.1	76.7	48.2	74.5	96.1
high	28.2	57.2	97.3	41.2	76.4	92.9	48.6	75.6	91.8
1979:									
low	46.0	38.1	76.4	41.7	39.9	61.4	49.6	62.7	69.3
average	41.2	44.7	77.8	74.5	47.1	62.1	55.2	68.2	77.0
high	46.2	50.7	84.2	77.2	53.9	63.0	83.3	84.1	80.9
1981:									
low	18.2	39.2	46.4	33.4	32.3	44.7	70.4	35.9	78.9
average	31.1	43.4	51.6	49.6	44.4	49.7	71.7	64.8	78.2
high	39.4	53.3	63.6	76.7	54.7	57.2	104.0	77.9	96.2

W = worse; S = similar; B = better

into the analyses, significant differences in subjective economic well-being were evident when comparing those aged 65 and over to those aged 35-49 (in 1977, 1979, and 1981) and 50-64 (in 1979 and 1981 - see Table 31b, Appendix A). As well, differences were apparent as a result of income. However, no age-related differences were found with regard to the impact of income on subjective assessments of economic well-being, suggesting that while older adults maintained more positive subjective well-being, they did so at all levels of (thus, irrespective of) income or objective economic well-being.

With the introduction of perceived deprivation relative to others into the analyses, income differences either disappear (in 1977 and 1979) or are greatly reduced (in 1981), suggesting that perceptions of relative deprivation serve to some degree to account for the impact of objective (income) on subjective economic well-being. However, age group differences in subjective economic well-being also remain significant with those 65 and over having significantly more positive well-being than those younger (in 1977, 1979, 1981), indicating that perceptions of relative deprivation do not explain age differences in subjective economic well-being.

Evidence of significant interactions involving age group, perceived economic deprivation relative to others, and income levels is also found (see Table 35b). Several of these involve age and perceptions of relative deprivation. In all three data sets, significant negative interactions emerge between older age group membership and perceptions of one's (economic or overall life) situation as being either better than or similar to that of the average person. In the 1979 and 1981 analyses,

similar interactions are also evident involving those in the middle aged group. Findings of this nature suggest that perceptions of either similarity or advantage relative to the average Canadian, although important for increasing feelings of economic security, are less important (having a less beneficial effect) among those in the older than middle or younger age groups (in 1977, 1979, and 1981) as well as among those in the middle than younger age groups (in 1979 and 1981). By implication therefore, the perception of one's situation as being worse than that of the average person also has a significantly less detrimental effect on feelings of economic well-being among those aged 65 and over when compared with those aged 35-49 or 50-64 (in 1977, 1979, and 1981) as well as a less negative impact on the subjective economic well-being of those aged 50-64 when compared with those aged 35-49 (in 1979 and 1981).

Significant positive three-way interactions are also found between old age, low (in 1977, 1979) or moderate (in 1981) income levels, and perceptions of one's situation as advantaged relative to others. This suggests that, for the older age group, perceptions of comparative well-being relative to others serve to enhance subjective economic well-being, offsetting (or modifying), at least in part, the otherwise negative implications of lower income levels for subjective assessments of economic well-being.

Other interactions are also evident that are, however, somewhat less consistent across the three sets of analyses. For example, in the 1979 data alone, the inclusion of the perceptual variable and interaction terms into the equation results in several significant negative interactions between age and income levels. Those in both the middle and older age

groups emerge as being more vulnerable to the negative implications of low incomes than those in the younger age group. Finally, in this data set alone, significant positive interactions involving middle age, low incomes, and perceptions of one's situation as similar to or better than that of the average person also suggests that more positive perceptions of comparative well-being may serve to enhance subjective economic well-being among those middle aged with low incomes. Similar trends are evident in both the 1977 and 1981 data as well. However, in neither case do these interactions emerge as significant.

Table 36 (also see Tables 36a:b, Appendix A) reports the results of similar analyses conducted with perceived justice or equity as a covariate. Older adults, as noted, were found to be somewhat less likely to perceive their (economic/overall) situations negatively relative to what they felt they deserved than were those who were younger.

Once again, the perceptual variable emerges as the major predictor of subjective assessments of economic well-being. However, in contrast with the findings obtained for perceptions of relative deprivation, income also tends to emerge as significant along with perceived justice or equity. No consistent and significant pattern of interaction effects is evident. Nevertheless, the amount of variance explained is slightly greater than it was for perceptions of relative deprivation, ranging from 18 percent (1979) to 28 percent (1977).

In the 1977 analyses, the inclusion of perceived equity or justice into the analyses reduces the impact of age on subjective economic well-being so that it is no longer significant. Income too is less strongly related, suggesting that perceptions of justice serve to account for the

Table 36

Mean Levels of Subjective Economic Well-Being by Income, Adjusted for Controls, with Age Group and Perceived Distributive Justice as Covariates

Sample	Age Group and Perceived Justice								
	35 - 49			50 - 64			65+		
Income	W	S	B	W	S	B	W	S	B
1977:									
low	27.6	50.8	71.2	25.4	53.1	72.0	52.5	59.4	85.2
average	33.3	62.6	70.6	43.3	45.7	82.9	51.2	70.2	81.0
high	38.6	63.2	80.2	44.8	66.4	92.1	64.3	73.4	95.1
1979:									
low	26.2	42.1	70.1	18.6	41.2	64.9	54.5	64.0	62.1
average	23.7	50.2	71.1	50.8	55.0	59.4	71.7	69.4	66.6
high	37.6	52.8	78.1	49.9	53.0	69.9	107.2	82.6	79.9
1981:									
low	25.2	33.5	42.4	21.6	34.7	55.0	29.7	67.4	76.0
average	30.7	34.3	53.0	37.2	34.6	61.7	39.5	73.2	79.4
high	53.1	49.0	59.4	51.4	50.6	67.1	62.4	92.6	97.4

W = worse; S = similar; B = better

effects of both age and income (either totally or in part) on subjective economic well-being. In the 1979 and 1981 analyses, the positive impact of older age group membership on subjective economic well-being remains significant (and indeed, becomes stronger) following the introduction of perceived justice as well as the interaction terms into the analyses. Income too remains significant, with little indication that its impact is reduced as a result of entering perceived justice into the analyses.

Earlier findings revealed older adults to be more likely to assess their situations (both economic and overall) positively relative to their aspirations and expectations when compared with those in the two younger age groups. In other words, older adults emerged as being significantly less likely to view their situations as improving in the future, a not unrealistic perception. When perceived attainment relative to aspirations is entered into the analyses, it too emerges as an important predictor of subjective economic well-being with the amount of variance explained increasing by a range of 7 percent (in 1981) to 13 percent (in 1977) to account for 16 percent (in 1979) to 22 percent (in 1977) of the total variance evident in subjective feelings of economic well-being. Income too remains a significant predictor, though its impact appears to have been reduced in the 1977 data.

The positive implications of old age for subjective economic well-being no longer emerge as significant in 1977 (see Table 37 and Tables 37a:b, Appendix A). As well, few consistent interactions are found, although in both 1977 and 1979, positive perceptions of attainment relative to aspirations are found to have significantly less positive implications for the subjective well-being of those in the middle aged

Table 37

Mean Levels of Subjective Economic Well-Being by Income, Adjusted for Controls, with Age Group and Perceived Attainment (Aspirations) as Covariates

Sample	Age Group and Perceived Attainment								
	35 - 49			50 - 64			65+		
Income	W	S	B	W	S	B	W	S	B
1977:									
low	26.0	49.3	89.7	22.8	45.8	53.2	41.1	83.2	70.7
average	35.2	60.4	82.8	22.9	64.0	68.5	56.2	89.7	70.7
high	38.4	60.6	100.2	38.1	70.3	82.4	42.2	108.6	84.1
1979:									
low	24.5	46.4	79.3	15.6	43.3	59.7	64.6	70.2	55.1
average	32.0	48.3	87.5	46.7	48.8	59.6	61.3	77.0	61.6
high	33.5	54.2	96.7	44.9	59.2	60.8	96.6	95.3	71.9
1981:									
low	18.7	42.3	37.6	25.6	30.0	50.5	46.3	58.9	72.8
average	30.3	48.2	43.3	36.9	33.0	61.6	67.7	68.1	68.4
high	47.8	60.3	42.6	52.6	47.4	66.4	72.2	82.2	96.0

W = worse; S = similar; B = better

group. Old age, however, remains significant in the 1979 and 1981 analyses, with those aged 65 and older having higher levels of subjective economic well-being than those aged 35-49 and 50-64.

When the role of perceptions of attainment relative to expectations is assessed, it too emerges as a significant predictor, but one accounting for considerably less of the overall variance in subjective well-being than was accounted for by perceptions of attainment relative to aspirations (see Tables 38 and 38a:b in Appendix A). Once entered, old age is no longer significant in the 1977 analyses, suggesting that age-related differences in perceptions of attainment can account for the tendency of older adults to have higher levels of subjective economic well-being. In the 1979 analyses, however, old age remains a significant and positive predictor despite controls for perceptions of attainment relative to expectations. As well, a significant interaction is evident between middle age, low income levels, and high perceptions of attainment. Among those in the middle aged group with low incomes, high perceptions appear particularly advantageous, resulting in increased subjective economic well-being.

Earlier findings revealed that perceptions of personal efficacy or control tended to be similar among those in the three age groups. According to the findings reported in Table 39 (also see Tables 39a:b in Appendix A), in general, assessments of subjective economic well-being also tend to increase as perceptions of self-efficacy increase. Those who perceive that they have a greater ability to control their own outcomes also assess their situations more positively than those who perceive themselves as having less control. This pattern is evident at all levels

Table 38

Mean Levels of Subjective Economic Well-Being by Income, Adjusted for Controls, with Age Group and Perceived Attainment (Expectations) as Covariates

Sample	Age Group and Perceived Attainment								
	35 - 49			50 - 64			65+		
Income	W	S	B	W	S	B	W	S	B
1977:									
low	24.6	52.5	60.7	27.2	38.8	52.1	115.3	31.9	66.9
average	40.9	60.4	68.8	36.7	65.0	63.8	114.9	63.8	69.4
high	48.3	67.8	83.2	61.3	69.5	76.0	117.4	61.6	81.0
1979:									
low	45.7	38.4	51.3	20.1	30.1	51.2	61.9	95.7	56.4
average	44.3	45.8	54.3	53.1	30.2	56.5	70.1	90.7	65.3
high	52.7	49.6	65.4	62.3	42.9	59.4	107.5	141.2	77.6

W = worse; S = similar; B = better

Table 39

Mean Levels of Subjective Economic Well-Being by Income, Adjusted for Controls, with Age Group and Perceived Efficacy as Covariates

Sample	Age Group and Perceived Efficacy								
	35 - 49			50 - 64			65+		
Income	Lo	Avg	Hi	Lo	Avg	Hi	Lo	Avg	Hi
1977:									
low	29.1	40.6	57.9	26.1	61.8	60.0	50.7	83.5	73.0
average	39.5	49.4	64.4	41.0	69.0	75.1	67.8	77.9	79.0
high	50.3	63.9	71.0	65.3	79.2	74.8	59.3	102.7	94.4
1979:									
low	20.2	54.0	50.0	46.8	67.3	50.7	72.3	75.9	66.3
average	41.6	54.0	60.7	80.6	64.0	52.3	89.0	70.6	73.6
high	46.0	68.6	64.0	82.3	68.7	58.6	102.4	83.7	90.0
1981:									
low	30.0	43.3	43.1	24.5	62.0	35.2	59.2	61.5	82.6
average	39.3	47.8	50.2	35.9	60.0	46.1	61.6	65.8	83.0
high	52.7	60.9	61.9	60.0	70.0	54.1	85.3	83.3	96.6

of income and, with some variation, in all three age groups.

Perceptions of personal efficacy and interactions with age and income contribute to increasing the amount of variance explained by 1 percent (1981) to 5 percent (1977); lower than that accounted for by perceived relative deprivation, justice, or attainment. Following the introduction of perceptions of personal efficacy into the analyses, income remains a significant predictor of subjective economic well-being (in 1977, 1979, and 1981). Age group also remains significant, though the positive effects of old age no longer attain significance in the 1977 analyses. Once again, however, no consistent pattern of significant interaction effects emerges.

Summary and Discussion

According to the accommodation model as outlined previously, age-related disparities between objective and subjective indicators of well-being reflect the effectiveness of strategies used by older adults, particularly those in poorer objective circumstances, to cope by accommodating themselves to their situations. The implications of this model are that: (a) disparities between objective and subjective well-being among the elderly are explained as the result of those in relatively poor circumstances who evaluate their situations more positively than appears warranted on the basis of objective conditions; (b) the lesser responsiveness of older adults to poorer objective circumstances will differentiate them from those in younger age groups; and (c) accommodation, reflected in perceptions of attainment, personal efficacy

and so forth, is predicted to offset (modify) the otherwise negative implications of poor objective conditions for subjective assessments of well-being. It therefore will account for differences in relationships between objective and subjective well-being among the different age groups.

The false consciousness model, as formulated, predicts the same age-related disparities between objective and subjective well-being. However, it attributes such disparities to the inaccurate appraisals of their situations that older adults, regardless of their objective circumstances, tend to have. Consistent with this model: (a) disparities between objective and subjective well-being among the elderly are predicted to be found at all levels of objective well-being; there is no interaction with objective conditions; (b) these disparities will reflect the relatively positive perceptions older individuals tend to have regarding their situations (including their perceptions of relative deprivation and distributive justice); and (c) it is these more positive perceptions that differentiate older adults from those in younger age groups.

The results from three different Canadian surveys indicate that, consistent with the results of previous research, older adults as a group (i.e., aggregate level analyses) have lower levels of income (objective economic well-being) but also, significantly higher levels of subjective economic well-being than those in younger age groups. This might imply that older adults are less responsive to their objective economic conditions and therefore, are less vulnerable to the negative effects of low income levels. By contrast, individual level analyses reveal that subjective economic well-being increases with increasing income within

each age group. The relationship between objective and subjective economic well-being is the same for those over 65 as it is for Canadians under 65 years of age. No differences were found in the impact of income on feelings of economic well-being across the three different age groups. This remained the case despite the introduction of controls for gender, education, and marital status.

Findings of this nature suggest that in contrast with the impression created by findings indicating age group differences in objective and subjective well-being, older individuals are not unresponsive to their objective economic circumstances. In fact, they are no less responsive to these circumstances than are those who are middle-aged or younger. The fact that older adults nevertheless maintain more positive levels of subjective economic well-being and do so at all levels of income suggests that other factors are likely to be involved.

In these data, older respondents were found to be significantly less likely than those in the two younger age groups to perceive their situations (economic - 1977/overall - 1979 and 1981) negatively relative to their aspirations and expectations for the future as well as to what they felt they deserved to have. Respondents aged 65 and over also revealed significantly lower aspirations and expectations for the future and assigned significantly lower rankings to the financial situations they felt they deserved to have. However, no significant age group differences were found with regard to either perceptions of relative deprivation or personal efficacy.

When the impact of these perceptual variables on age-differentiated relationships involving objective and subjective economic well-being was

assessed, somewhat different findings emerged depending upon the particular variables and data sets examined. The inclusion of perceptions of relative deprivation into the analyses revealed findings indicating that perceptions of this nature had a significant influence over feelings of economic well-being and accounted (either in whole or in part) for the effects of income on subjective economic well-being.

As noted, older adults were no less likely than those in the two younger age groups to perceive their situations as reflecting relative deprivation. However, the findings revealed the importance of perceptions of relative deprivation for subjective assessments of well-being varied somewhat across age groups: older adults were less negatively affected by perceptions of relative deprivation than were younger adults. As well, there was some evidence to indicate that, for older adults in particular, perceptions of relative advantage served to enhance feelings of economic well-being among those with relatively low levels of income.

For the most part, these findings would appear to offer little support for either the accommodation or false consciousness models as initially formulated. Old age remains a significant and positive determinant of subjective economic well-being (and indeed, becomes stronger) after perceptions of relative deprivation as well as interactions involving perceived relative deprivation, age, and income are taken into account. This offers little support for either model. Whereas findings indicating that perceptions of relative advantage were particularly significant in enhancing subjective well-being among older adults with low incomes suggest the possibility of accommodation, findings that age-related disparities in relationships between objective and

subjective well-being persist across levels of income and are not primarily evident at the low income levels offers little support for the accommodation hypothesis. Finally, in contrast with the false consciousness interpretation, not only are older individuals found to be responsive to their objective economic situations, but there is little evidence to indicate that older adults' higher subjective well-being results from their more positive perceptions of well-being relative to others.

In two of the three data sets (1977 and 1981), those aged 65 and over were found to perceive significantly greater justice or equity with regard to their (economic/overall) life situations than were those in the two younger age groups. As well, in the 1977 analyses, no evidence was found to indicate significant differences among the age groups with regard to subjective assessments of economic well-being once perceptions of justice were controlled for, suggesting that given similar levels of perceived justice, those aged 65 and over are no more likely to assess their economic situations positively than are those in the younger age groups, regardless of income. These findings would appear to offer a measure of support for the false consciousness model. However, the magnitude of these effects was not large. As well, the findings differ from those obtained in both the 1979 and 1981 analyses. In these analyses, age remained a significant and positive predictor of subjective economic well-being despite controls for perceptions of justice.

Perceptions of attainment relative to aspirations and expectations were, in all cases, found to be more positive among those in the oldest age group - that is, older adults perceived less of a negative discrepancy

between what they currently had and what they expected and aspired to in the future. Once included in the analyses, again no findings indicating significant age group differences in subjective well-being emerged in the 1977 data. Therefore, according to these data, given similar levels of perceived attainment, those aged 65 and older would appear to be no more likely to assess their economic situations positively than do those in the younger age groups, regardless of actual income.

In the 1979 and 1981 analyses, however, old age remains an equally strong and positive predictor of feelings of economic well-being despite controls for perceived attainment and interactions with income and age. As well, there is no indication that perceptions of attainment serve to modify the effects of low incomes on subjective economic well-being.

Finally, with regard to perceptions of personal efficacy or control, little evidence was found to indicate age group differences in levels of perceived personal efficacy. Yet, in the 1977 analyses, old age ceased to emerge as a significant predictor of subjective well-being once perceptions of efficacy and its interactions with age and income were controlled for.

2. Health and Perceived Health Status

In order to assess age-related patterns in relationships between objective and perceived health status, average levels of objective and perceived health among the three age groups (35-49, 50-64, 65 and over) were compared. As expected, increases with age were found in the average number of days of illness and the number of chronic conditions reported

(in 1977) as well as the extent to which respondents reported being bothered by both common ailments and long standing health problems (in 1979 and 1981 - see Table 40). Perceptions of health also emerged as being significantly poorer among older respondents, a finding consistent with previous research in the area.

To examine the impact of both short- and long-term health problems on perceptions of health across the three age groups, perceptions of health were initially regressed on the health status measures separately within each age group. Categorical measures of health were used to facilitate age group comparisons within levels of health. The mean levels of perceived health status are reported in Table 41 (see Tables 41a:b, Appendix A for the more complete regression equations). They reveal aggregate, negative relationships between both short- and long-term illness conditions and perceived health: as the number of days of illness, the number of common ailments, and the number of chronic or long-term conditions increase, perceptions of health status decrease. The objective health measures alone account for 23 percent (among those aged 35-49, 1977) to 36 percent (among those aged 50-64, 1981) of the variance apparent in subjective perceptions of health.

In contrast with previously reported research findings indicating that when differences of objective health status are taken into account, older adults actually evaluate their health more positively than those in younger age groups, these findings suggest the reverse; that is, older adults continue to evaluate their health status more negatively than those in younger age groups, given similar levels of objective or reported health. Significant differences in levels of perceived health are found

Table 40

Oneway Analysis of Variance: Objective and Perceived Health
by Age Group - 1977, 1979, 1981

Sample: Variable	N	$\bar{x}$	S.D.	F*
1977:				
Number of days ill				
35 - 49	846	.43	.89	9.27
50 - 64	688	.50	.98	
65 +	361	.69	1.15	
Number of chronic conditions				
35 - 49	846	.21	.45	62.57
50 - 64	689	.43	.60	
65 +	361	.58	.74	
Perceived health				
35 - 49	846	3.61	.99	50.57
50 - 64	689	3.17	1.03	
65 +	359	3.08	1.09	
1979:				
Frequency - acute conditions				
35 - 49	766	1.59	.43	10.78
50 - 64	626	1.69	.51	
65 +	336	1.71	.49	
Functional disability				
35 - 49	753	1.57	1.39	44.82
50 - 64	619	2.20	1.97	
65 +	326	2.61	2.22	
Perceived health				
35 - 49	766	3.69	.98	106.33
50 - 64	626	3.20	1.00	
65 +	336	2.79	1.01	

Table 40 (continued)

1981:				
Frequency - acute conditions				
35 - 49	758	1.65	.45	11.89
50 - 64	627	1.66	.48	
65 +	358	1.79	.52	
Functional disability				
35 - 49	755	1.63	1.40	37.23
50 - 64	622	2.15	1.89	
65 +	357	2.55	2.09	
Perceived health				
35 - 49	758	3.72	.95	85.76
50 - 64	627	3.25	1.08	
65 +	358	2.93	.99	

*$p<.001$

Table 41

Mean Levels of Perceived Health by Health Status
with Age Group as a Covariate

Sample Health Status	Age Group 35 - 49	50 - 64	65+
1977:			
No Short or Longterm	3.88	3.66	3.64
Short1	3.58	3.41	3.04
Short2	3.06	2.91	2.86
Short3	2.57	2.66	2.61
Longterm1	3.36	2.83	3.01
Longterm2	2.96	2.60	2.79
1979:			
No Short or Longterm	4.11	3.77	3.32
Short1	3.95	3.60	3.27
Short2	3.52	3.27	2.53
Short3	3.31	2.97	2.45
Short4	3.38	2.71	2.39
Longterm1	3.68	3.39	2.89
Longterm2	3.35	3.26	3.19
Longterm3	2.82	2.67	2.48
1981:			
No Short or Longterm	4.17	4.07	3.85
Short1	3.95	3.69	3.35
Short2	3.78	3.38	2.98
Short3	3.37	3.27	2.43
Short4	3.16	2.96	2.39
Longterm1	3.86	3.28	3.77
Longterm2	3.49	3.17	3.73
Longterm3	2.64	2.74	3.19

when comparing those aged 65 and over to those aged 35-49 and 50-64 in all three data sets (see Table 41b, Appendix A).

The impact of short-term or commonly encountered illnesses on perceptions of health status are, in general, found to be similar regardless of age. However, in analyses of data drawn from two of the three sets of analyses (1979, 1981), long-term chronic illness or disability has a significantly greater negative effect on those in the younger age groups and particularly, on those aged 35-49. Both moderately high and high levels of chronic illness and disability emerge as having significantly less negative effects on perceived health status among those aged 65 and over and those aged 50-64 than on those aged 35-49.

Overall, these findings would appear to offer only limited support to arguments in the literature concerning the more positive assessments of health that are said to be characteristic of older individuals when compared with those middle-aged or younger (see, for example, Cockerham, Sharp and Wilcox, 1983). Even when differences in objective health status are taken into account, these data suggest that those aged 65 and over evaluate their health status more negatively than do those who are younger.

Once again, the possibility exists that the greater tendency of older adults to negatively evaluate their health may be a consequence of "compositional" effects. Older adults may be more likely to be female, to be widowed, and/or to have lower levels of education. All three of these factors may serve to suppress the otherwise positive implications of old age for subjective assessments of health. To examine this issue further, Table 42 (see Tables 42a:b, Appendix A) reports the results of

analyses conducted controlling for the influence of these factors. The inclusion of these variables into the equations increases the amount of variance explained by only 1 percent to 5 percent, depending upon the particular age group and data set involved. Neither gender nor marital status have any significant effect however. Only education emerges as a relatively consistent, significant predictor. Those with more education tend to assess their health more positively than those with less education, regardless of reported levels of objective health.

Overall, the findings differ somewhat from those obtained with regard to income. The amount of variance in subjective well-being accounted for by the health indicators is considerably greater than that explained by income. As well, the same aggregate age differences in the relationships between objective and subjective well-being are not found. This suggests the importance of taking the particular substantive area into account. Age-related patterns of objective and subjective well-being vary and are therefore, not generalizeable across domains. Attention to general patterns is likely to obscure such differences.

The differences in levels of perceived health that were evident in association with age prior to the introduction of controls remain significant once the controls are entered. The overall conclusion would therefore appear to be that those aged 65 and over continue to assess their health status somewhat more negatively than those aged 35-49 or 50-64 given similar levels of objective health. The only indication that older adults may be less responsive to objective health problems and consequently, evaluate their health status more positively than those in other age groups comes as a result of evidence indicating that they may

Table 42

Mean Levels of Perceived Health by Health Status,
Adjusted for Controls, with Age Group as a Covariate

Sample Health Status	Age Group 35 - 49	50 - 64	65+
1977:			
No Short or Longterm	3.27	3.40	3.55
Short1	2.94	3.12	2.98
Short2	2.52	2.61	2.80
Short3	2.06	2.42	2.55
Longterm1	2.73	2.61	2.91
Longterm2	2.38	2.83	2.73
1979:			
No Short or Longterm	3.74	3.42	2.90
Short1	3.59	3.26	2.90
Short2	3.18	2.97	2.23
Short3	2.98	2.65	2.19
Short4	3.06	2.36	2.16
Longterm1	3.30	3.04	2.46
Longterm2	2.98	2.91	2.71
Longterm3	2.49	2.35	2.00
1981:			
No Short or Longterm	3.67	3.76	3.76
Short1	3.44	3.38	3.24
Short2	3.29	3.10	2.90
Short3	2.92	3.00	2.33
Short4	2.77	2.70	2.32
Longterm1	3.33	2.98	3.67
Longterm2	3.04	2.85	3.64
Longterm3	2.16	2.43	3.10

be somewhat less likely to assess their health as poorly when confronted with relatively severe long-term illness and disability.

To examine what impact, if any, perceptual factors have on relationships between objective and subjective health status, further analyses were conducted with each perceptual variable (including perceptions of relative deprivation, distributive justice, attainment considered relative to aspirations and expectations, and personal efficacy or control) included. In each case, three categories of response were once again examined (with cutoffs established so that as close as possible to one-third of the overall sample fell within each group). They included those perceiving their situations as being comparatively worse, about the same, or better off than implied by the particular standard of comparison used or, in the case of personal efficacy or control, those perceiving themselves as having relatively low, moderate, or high levels of personal efficacy. The results are reported in Tables 43 to 47 (also see Tables 43a:b to 47a:b, Appendix A).

When perceived deprivation relative to others as well as interactions among age group, health status, and perceived deprivation are included in the analyses (see Table 43 and Table 43a:b, Appendix A), few major changes result. Those who perceive their situations more positively relative to the average person also tend to assess their health more positively than do those who perceive their situations in more negative terms. The overall amount of variance explained increases by only 1 percent (1979, 1980) to 5 percent (1977), with the overall amount of variance explained now ranging from 37 percent (1977) to 41 percent (1981).

Table 43

Mean Levels of Perceived Health by Health Status, Adjusted for Controls, with Age Group and Perceived Relative Deprivation as Covariates

Sample	Age Group and Perceived Deprivation								
	35 - 49			50 - 64			65+		
Health	W	S	B	W	S	B	W	S	B
1977:									
None	3.2	3.2	3.5	3.5	3.1	3.5	3.5	3.1	3.9
Short1	2.8	2.9	3.2	2.8	3.8	3.0	2.2	3.2	3.2
Short2	2.2	2.8	2.7	2.6	2.5	2.8	2.6	2.2	3.3
Short3	1.3	2.0	2.5	2.4	2.5	2.7	2.2	2.5	3.0
Longterm1	2.8	2.8	2.8	2.5	2.3	2.9	2.6	2.5	3.3
Longterm2	3.2	1.8	2.1	2.3	2.3	2.4	2.6	2.5	3.1
1979:									
None	3.7	3.8	3.8	2.5	3.5	3.6	2.5	2.5	3.4
Short1	3.7	3.6	3.7	2.9	3.4	3.3	2.9	2.7	3.2
Short2	2.9	3.3	3.3	3.1	3.0	3.0	2.3	1.9	3.0
Short3	2.5	3.3	2.9	2.5	2.8	2.8	2.0	2.1	2.3
Short4	3.2	2.5	2.9	2.1	2.6	2.6	2.6	1.6	2.0
Longterm1	4.2	3.3	3.2	1.6	3.1	3.2	2.5	2.0	3.0
Longterm2	3.3	3.2	2.3	1.8	2.9	3.1	1.8	2.1	3.6
Longterm3	2.7	2.3	2.7	1.0	2.7	2.5	1.3	1.5	3.0
1981:									
None	3.3	3.6	3.9	4.2	3.4	4.1	2.7	3.9	3.9
Short1	3.0	3.7	3.5	4.0	3.2	3.6	2.3	3.1	3.5
Short2	2.8	3.5	3.4	3.6	2.9	3.5	1.9	2.9	3.0
Short3	2.8	3.2	2.8	3.6	3.3	3.0	1.3	2.4	2.5
Short4	2.4	2.9	2.9	3.1	2.7	3.4	0.7	2.3	2.8
Longterm1	3.0	3.2	3.6	4.4	2.5	3.2	2.6	3.7	3.6
Longterm2	2.6	3.2	3.2	2.5	2.7	3.0	2.7	3.8	3.5
Longterm3	1.4	2.3	2.8	2.8	2.0	2.9	2.4	3.1	3.3

W = worse; S = similar; B = better

The finding that older adults tend to evaluate their health status more negatively than those in the younger age groups, which was evident prior to the introduction of perceived well-being relative to others into the analyses, remains significant in two of the three data sets (1979 and 1981). As well, there is little indication that perceptions of advantage or disadvantage relative to others serve to account for the impact of short-term or acute illness conditions on subjective assessments of health. In two of the three data sets (1977, 1979), however, the impact of longer term or chronic conditions is somewhat reduced, suggesting that differences in perceptions of relative deprivation may, to some extent at least, serve to mediate the effects of chronic illness on subjective assessments of health.

Prior to introducing perceptions of relative deprivation into the analyses, the impact of short-term illness on subjective assessments of health was found to be similar regardless of age. However, the impact of chronic conditions was found to be somewhat greater among those in the younger age groups (in 1979 and 1981). This suggests older adults may be less vulnerable to the negative implications of chronic illness than younger adults, perhaps because they have had the illnesses longer and consequently, have adjusted to them better. Following the introduction of perceptions of relative deprivation and interactions with age and objective health status into the analyses, these findings appear in the 1981 analyses only. No other significant interactions are found.

Similar analyses conducted with perceived justice as a covariate are reported in Table 44 (also see Tables 44a:b, Appendix A). In general, perceptions of having as much or more than one feels one deserves to have

Table 44

Mean Levels of Perceived Health by Health Status, Adjusted for Controls, with Age Group and Perceived Justice as Covariates

Sample	Age Group and Perceived Justice								
	35 - 49			50 - 64			65+		
Health	W	S	B	W	S	B	W	S	B
1977:									
None	3.0	3.1	3.6	3.1	3.0	3.6	3.0	3.4	3.7
Short1	2.9	3.1	3.1	2.8	2.8	3.6	2.0	3.6	3.2
Short2	2.4	2.5	2.6	2.3	2.4	2.8	2.3	2.7	3.0
Short3	1.7	2.1	2.5	2.3	2.5	2.6	1.6	2.5	2.8
Longterm1	2.6	2.7	3.0	2.1	2.4	2.8	2.2	2.8	3.1
Longterm2	2.7	2.2	1.8	2.1	1.6	2.7	2.4	3.1	2.7
1979:									
None	3.8	3.7	3.9	2.6	4.2	3.2	2.0	2.9	3.2
Short1	3.7	3.2	3.9	2.8	3.4	3.3	2.4	3.3	2.9
Short2	3.1	2.9	3.3	2.5	3.0	3.1	2.3	2.3	2.3
Short3	2.5	2.8	3.3	2.4	2.4	2.9	2.0	2.4	2.2
Short4	3.3	2.8	2.7	1.9	2.2	2.9	2.2	2.3	1.8
Longterm1	3.3	3.0	3.6	1.8	3.9	2.8	1.6	2.5	2.7
Longterm2	3.2	2.9	2.9	2.3	3.9	2.5	1.5	2.2	3.2
Longterm3	2.2	2.1	3.1	1.3	3.8	2.0	1.0	2.1	2.4
1981:									
None	3.7	3.6	3.7	3.2	3.7	4.0	3.5	3.3	3.8
Short1	3.4	3.5	3.5	2.9	3.3	3.5	3.0	3.5	3.2
Short2	3.0	3.3	3.3	2.5	3.1	3.2	3.2	2.8	3.0
Short3	2.8	2.7	3.3	2.8	2.8	3.1	2.2	2.6	2.4
Short4	2.8	2.2	3.3	2.6	2.7	2.8	1.7	2.3	2.7
Longterm1	3.0	3.4	3.3	2.8	3.0	3.0	3.6	3.0	3.7
Longterm2	3.2	3.1	2.8	2.1	2.8	3.0	3.5	3.1	3.5
Longterm3	2.1	2.3	2.4	1.8	2.8	2.4	2.9	2.4	3.2

W = worse; S = similar; B = better

emerge as having little direct effect on perceptions of health (being significant only in the 1977 analyses). The negative impact of old age on perceptions of health remains (though no longer statistically significant in 1977). As well, there is little evidence to suggest that such perceptions serve to offset or buffer the otherwise negative implications of poor objective health status on subjective perceptions of health. Rather, no consistent pattern of interactions with age and objective health status are found.

When perceptions of attainment relative to aspirations or expectations or perceptions of personal efficacy or control are entered, the findings are virtually the same (see Tables 45-47; also see Tables 45a:b to 47a:b, Appendix A).

Summary and Discussion

Both the accommodation and false consciousness models, as outlined, rest on the assumption that, despite worse objective conditions, older adults assess their situations more positively than those in younger age groups. The accommodation model leads us to expect that resulting age-related disparities between objective and subjective well-being reflect the effectiveness of the various coping strategies used by older adults and particularly, by those in poor objective circumstances, to come to terms with their situations. The false consciousness model, in contrast, regards age-related disparities between objective and subjective well-being as resulting from the inaccurate perceptions older individuals as a group tend to have regarding their situations.

In relation to health, the analyses conducted here have revealed

Table 45

Mean Levels of Perceived Health by Health Status, Adjusted for Controls, with Age Group and Perceived Attainment (Aspirations) as Covariates

Sample	Age Group and Perceived Attainment								
	35 - 49			50 - 64			65+		
Health	W	S	B	W	S	B	W	S	B
1977:									
None	3.4	3.1	3.8	3.2	3.0	3.9	3.1	3.5	3.9
Short1	3.0	2.8	3.7	2.9	3.0	3.5	2.0	3.4	3.1
Short2	2.3	2.8	2.7	2.5	2.2	3.2	1.9	2.9	3.0
Short3	2.1	2.0	2.4	2.3	2.5	2.7	1.8	2.3	3.0
Longterm1	2.9	2.8	2.7	2.4	2.4	3.0	2.6	3.0	3.2
Longterm2	2.6	2.3	2.1	2.1	2.1	2.6	2.8	2.6	3.0
1979:									
None	3.4	3.6	4.6	3.2	3.4	3.4	3.1	3.3	2.8
Short1	3.4	3.4	4.3	2.9	3.2	3.4	3.2	3.0	2.6
Short2	2.8	3.2	3.4	2.3	3.0	3.1	2.6	2.6	2.3
Short3	2.5	3.1	3.2	2.1	2.4	3.0	3.3	2.3	2.0
Short4	2.9	3.0	0.7	1.8	1.8	2.9	2.1	2.9	1.9
Longterm1	3.0	3.2	3.9	2.8	2.9	3.1	3.0	2.6	2.5
Longterm2	2.7	2.9	3.1	3.1	2.9	2.6	2.8	3.3	2.4
Longterm3	2.1	2.2	4.2	2.0	2.9	2.2	2.3	2.4	2.0
1981:									
None	3.7	3.6	3.9	4.0	3.6	4.0	3.8	3.4	3.9
Short1	3.4	3.4	3.7	3.0	3.4	3.4	2.8	3.2	3.4
Short2	3.3	3.3	3.3	2.5	3.1	3.2	3.0	2.6	3.2
Short3	3.2	2.7	3.2	3.0	2.9	2.8	2.3	2.4	2.4
Short4	2.9	2.7	4.8	2.7	2.8	2.7	1.5	2.0	2.9
Longterm1	3.1	3.5	2.7	3.5	3.0	3.0	3.8	3.2	3.6
Longterm2	3.3	3.0	2.8	2.6	2.8	3.0	4.1	3.5	3.2
Longterm3	2.0	2.6	2.4	2.5	2.6	2.4	3.7	2.8	2.9

W = worse; S = similar; B = better

Table 46

Mean Levels of Perceived Health by Health Status, Adjusted for Controls, with Age Group and Perceived Attainment (Expectations) as Covariates

Sample	Age Group and Perceived Attainment								
	35 - 49			50 - 64			65+		
Health	W	S	B	W	S	B	W	S	B
1977:									
None	3.4	3.3	3.3	3.3	3.4	3.4	2.7	2.4	3.7
Short1	3.3	2.8	3.3	3.8	2.9	3.0	0.0	2.3	3.1
Short2	2.7	2.7	2.4	2.1	2.4	2.7	1.6	2.2	2.9
Short3	2.0	2.2	2.0	2.5	2.3	2.5	0.6	1.5	2.8
Longterm1	2.9	3.1	2.4	2.4	2.8	2.5	2.0	1.5	3.1
Longterm2	3.0	2.7	2.0	1.9	2.2	2.4	2.2	2.4	2.8
1979:									
None	3.7	3.7	3.8	3.1	4.3	3.4	3.9	2.7	3.0
Short1	3.4	3.5	3.7	2.8	4.0	3.2	3.8	2.8	3.0
Short2	2.8	3.6	3.1	2.9	3.1	3.0	3.7	2.4	2.2
Short3	2.4	3.7	3.0	2.5	2.7	2.6	3.0	3.4	2.2
Short4	2.9	3.6	2.6	1.6	2.2	2.7	2.4	1.9	2.2
Longterm1	3.4	3.0	3.4	2.5	3.9	3.0	4.7	2.1	2.6
Longterm2	3.0	2.5	3.2	3.1	3.5	2.8	1.3	2.4	2.8
Longterm3	2.2	2.0	3.0	2.3	4.3	2.1	3.0	1.6	2.2

W = worse; S = similar; B = better

Table 47

Mean Levels of Perceived Health by Health Status, Adjusted for Controls, with Age Group and Perceived Self Efficacy as Covariates

Sample	Age Group and Perceived Efficacy								
	35 - 49			50 - 64			65+		
Health	Lo	Avg	Hi	Lo	Avg	Hi	Lo	Avg	Hi
1977:									
None	3.0	3.5	3.6	3.0	3.5	3.7	3.3	4.2	3.4
Short1	2.8	3.0	3.4	3.0	3.1	3.2	2.1	4.1	3.2
Short2	2.7	2.5	2.6	2.3	2.8	3.0	2.7	3.9	2.3
Short3	1.8	2.2	2.5	2.1	2.9	1.9	2.4	3.0	2.4
Longterm1	2.5	3.0	3.0	2.3	2.7	3.0	2.8	3.5	2.8
Longterm2	2.8	2.6	2.0	2.3	2.9	2.3	2.6	2.4	2.9
1979:									
None	3.5	4.5	3.6	3.0	3.3	3.7	2.8	3.1	3.2
Short1	3.6	4.3	3.5	3.1	3.3	3.5	2.9	3.2	2.8
Short2	2.7	3.7	3.5	2.7	3.1	3.3	2.3	2.5	2.2
Short3	2.3	3.6	3.1	2.5	2.8	2.7	2.1	2.5	2.3
Short4	2.6	3.9	1.8	2.2	2.5	3.3	2.0	3.0	1.7
Longterm1	3.3	3.9	3.1	1.9	3.0	3.4	2.5	2.7	2.6
Longterm2	2.9	4.2	2.5	2.6	2.7	3.1	2.5	3.0	3.1
Longterm3	2.6	3.0	2.3	1.8	2.3	3.1	2.0	2.5	2.3
1981:									
None	3.8	3.6	3.8	3.9	4.3	3.5	3.4	4.2	4.0
Short1	3.6	3.2	3.7	3.2	3.9	3.4	3.0	3.5	3.3
Short2	3.3	3.1	3.5	2.8	3.8	3.0	2.5	3.9	2.1
Short3	2.7	2.9	3.6	2.8	3.2	3.1	2.0	2.4	2.8
Short4	3.2	2.3	2.4	2.7	3.4	2.9	1.9	2.6	2.9
Longterm1	3.4	3.1	3.7	3.4	3.4	2.7	3.5	4.1	3.4
Longterm2	3.0	3.2	3.4	3.4	3.4	2.7	3.5	4.1	3.4
Longterm3	2.1	2.8	2.2	2.3	3.0	2.6	2.6	3.7	3.2

little support for assumptions that older adults as a group tend to be more optimistic in their subjective assessments of health than those who are younger. Rather, the older age groups in this study were found to assess their health status more negatively than those aged 35 - 49 and 50 - 64 after controlling for actual health, gender, education, and marital status.

Few differences were found in the impact of short-term or acute illness conditions on perceptions of health status across the age groups. However, there was some evidence to suggest that older adults are less responsive to (i.e., less negatively affected by) longer term chronic illness and consequently, might be somewhat less likely than those in the younger age groups to assess their health as poorly when confronted with such illness.

When the impact of perceptual factors (including perceptions of relative deprivation, justice, attainment, and personal efficacy) on relationships among age, objective and subjective health status was examined, somewhat different findings emerged depending upon the particular data set employed. However, the findings tended to be similar regardless of which perceptual variable was examined.

Older adults were no less likely than those younger to perceive their overall life situations as reflecting deprivation relative to the average Canadian. Nor was there strong evidence to indicate perceptions of relative deprivation served to account for the effects of objective health status on subjective assessments of health. Finally, no evidence was found to support the coping argument that perceptions of well-being relative to others offset the otherwise negative implications of poor

objective health for subjective assessments, particularly among older adults.

Generally similar findings emerged when the role of perceptions of justice or equity was examined. When perceptions of attainment were assessed, slight differences emerged, possibly because of age differences in levels of perceived attainment relative to aspirations and expectations: older individuals, as noted, tended to assess their situations more positively relative to their aspirations and expectations than did those in the younger age groups. However, the overall pattern was once again similar with perceptions of attainment having similar implications for subjective well-being among those who were older and had higher levels of illness when compared with others. This was also the case when perceptions of personal efficacy were included.

Overall therefore, these findings offer little or no support for either model. In contrast with the basic assumption behind both models, age-related disparities between objective and subjective well-being were found to be in the opposite direction to that expected. As well, unlike expectations generated by the false consciousness model, there was little evidence to indicate that older adults maintained more positive perceptions of their life situations and consequently, also assessed their health status more positively than those in younger age groups.

Some evidence was found to indicate that, as predicted by the accommodation model, poor objective health had a less negative impact on subjective assessments of health among older individuals; that is, that older adults tended to be somewhat less responsive to poorer objective health conditions than did those who were younger. However, there was

little indication that perceptual factors (including perceptions of attainment, well-being relative to others, justice, and personal efficacy) served to offset the otherwise negative implications of ill health for subjective assessments of health, particularly among older than middle-aged or younger adults.

These results differ a good deal from those obtained when assessing relationships between income and subjective economic well-being. Whereas relationships between objectively and subjectively assessed health were relatively close and "isomorphic", relationships between objective and subjective economic well-being were considerably looser. As well, older adults were found to evaluate their health status more negatively than younger adults, given similar levels of objective (reported) health. However, in terms of economic criteria, older adults were found to evaluate their situations more positively than those who were younger but with similar levels of objective well-being. Clearly, age-related patterns involving relationships between objective and subjective well-being are not generalizeable across all domains of well-being.

3. Income, Health and Perceived Overall Well-Being

Table 48 reports the results of bivariate analyses conducted comparing the average levels of overall subjective well-being apparent among those in the three different age groups. The findings are consistent across the different data sets. In each case, those aged 65 and older are found to evaluate their overall life situations somewhat more positively than those in either of the other two age groups. The

Table 48

Oneway Analysis of Variance: Perceived Overall Well-Being
by Age Group - 1977, 1979, 1981

Sample Age Group	N	$\bar{x}$	S.D.	F*
1977:				
35 - 49	842	30.40	9.66	3.13
50 - 64	686	29.74	10.59	
65 +	359	31.39	10.48	
1979:				
35 - 49	762	6.80	2.18	3.70
50 - 64	624	6.59	2.47	
65 +	336	7.01	2.48	
1981:				
35 - 49	760	6.95	2.41	3.00
50 - 64	625	7.04	2.15	
65 +	358	7.32	2.71	

*$p<.05$

differences, although significant and consistent, are however found to be extremely modest in magnitude.

As noted earlier, both the accommodation and false consciousness models suggest that differences in subjective well-being between older and middle-aged or younger age groups reflect the lesser responsiveness of older adults to poor objective conditions. However, whereas the accommodation model leads to the expectation that the differences are primarily evident at the lower levels of objective well-being, the false consciousness model, in contrast, suggests that the differences persist across different levels of objective well-being. To examine relationships between objective and subjective indicators of well-being, the latter was regressed on indicators of objective economic well-being (income) and health status (short- and long-term illness conditions) with age group used as a covariate. The findings are reported in Table 49 (also see Tables 49a:b, Appendix A). For the most part, assessments of subjective well-being are found to increase as income increases and as health problems (particularly shorter term acute health problems) decline. Indicators of health and income alone account for from 2 to 22 percent of the overall variance evident in subjective assessments of overall well-being.

Interestingly however, in these analyses, differences in levels of subjective well-being across the three age groups no longer emerge as statistically significant in two of the three data sets (i.e., 1977 and 1979). In the 1981 analyses where age differences are significant, those aged 65 and over are once again found to have higher levels of subjective well-being than those aged 35-49 or 50-64.

Table 49

Mean Levels of Overall Well-Being by Income and Health
with Age Group as a Covariate

Sample Income and Health	Age Group 35 - 49	50 - 64	65+
1977:			
Lo inc	28.65	28.07	34.78
Avg inc	31.98	30.29	32.01
Short1	31.90	30.65	27.85
Short2	30.14	31.88	31.09
Short3	28.51	25.75	28.39
Longterm1	30.62	30.65	29.85
Longterm2	28.97	29.97	28.75
a	31.37	32.79	31.98
1979:			
Lo inc	7.46	7.27	8.34
Avg inc	7.78	7.65	8.40
Short1	7.01	7.20	7.52
Short2	6.17	6.40	6.22
Short3	6.21	5.91	8.26
Short4	4.48	5.39	5.41
Longterm1	7.52	7.47	8.74
Longterm2	7.91	7.96	8.18
Longterm3	7.69	6.20	6.65
a	7.78	7.65	8.28
1981:			
Lo inc	6.93	7.51	9.06
Avg inc	7.31	8.30	8.46
Short1	7.83	7.37	8.51
Short2	7.22	6.53	7.74
Short3	7.01	6.83	8.16
Short4	6.05	5.79	6.47
Longterm1	7.98	8.01	8.71
Longterm2	7.23	7.86	8.56
Longterm3	6.59	7.38	7.66
a	7.99	8.09	9.30

There is some evidence to suggest that the impact of income and health status on subjective feelings of well-being varies depending upon age. In particular, in analyses of data drawn from both the 1977 and 1981 surveys, lower levels of income are found to have a significantly greater negative impact on assessments of well-being among those aged 35-49 and 50-64 than they are among those aged 65 and over. According to the 1979 data as well, middle-aged and older respondents are significantly more responsive to the negative implications of chronic illness than are those in the younger age group. However, similar findings are not evident on the basis of either the 1977 or 1981 surveys.

To examine the effects of sociodemographic variations on these relationships, Table 50 (see Tables 50a:b, Appendix A) reports the results of similar analyses conducted controlling for the effects of gender, education, and marital status. Education emerges as a significant positive predictor of overall feelings of well-being in two of the three analyses (i.e., 1977 and 1981). Gender is significant in only two instances, both involving different age groups as well as different data sets. Marital status, however, emerges as a relatively consistent and positive predictor of well-being: those who are married are found to have significantly higher levels of overall subjective well-being than do those who are not married (i.e., single, widowed, divorced or separated).

However, with regard to age group differences in relationships between objective and subjective indicators of well-being, the findings differ relatively little from those obtained previously. Once again, in 1977 and 1981, the perceived well-being of older adults appears to be less negatively affected by low income levels than does that of middle-aged and

Table 50

Mean Levels of Overall Well-Being by Income and Health, Adjusted for Controls with Age Group as a Covariate

Sample Income and Health	Age Group 35 - 49	50 - 64	65+
1977:			
Lo inc	23.64	26.23	31.54
Avg inc	26.27	27.06	28.44
Short1	26.15	26.60	25.83
Short2	24.55	27.89	27.90
Short3	22.72	22.31	25.47
Longterm1	24.85	26.86	26.88
Longterm2	23.94	26.12	25.80
a	25.73	28.98	28.99
1979:			
Lo inc	6.49	6.40	8.11
Avg inc	6.67	6.76	8.13
Short1	5.98	6.22	7.24
Short2	5.13	5.48	5.94
Short3	5.15	4.90	8.05
Short4	3.57	4.42	5.25
Longterm1	6.49	6.44	7.50
Longterm2	6.89	6.97	7.93
Longterm3	6.71	5.32	6.39
a	6.75	6.67	8.01
1981:			
Lo inc	5.64	6.75	8.31
Avg inc	5.91	7.55	7.78
Short1	6.35	6.50	7.69
Short2	5.79	5.69	6.85
Short3	5.63	6.02	7.25
Short4	4.76	4.98	5.66
Longterm1	6.50	7.21	8.07
Longterm2	5.83	6.92	7.94
Longterm3	5.14	6.58	7.12
a	6.54	7.26	8.68

younger adults. In analyses of the 1979 data, chronic illness is found to have a negative impact on subjective well-being but only among those who are middle-aged or older. Similar findings are not apparent in either 1977 or 1981.

Tables 51-55 (also see Tables 51a:b to 55a:b, Appendix A) report the findings obtained when perceptions of attainment, relative deprivation, and personal efficacy or control are included as covariates along with age group. In general, subjective feelings of well-being are found to increase as perceptions of attainment, standing relative to others, perceived justice, and feelings of personal efficacy increase. The inclusion of each of these variables into the equations results in increasing the amount of variance explained by anywhere from 1 percent to 29 percent, with variation dependent upon the particular perceptual variable, age group, and data set involved.

Once perceptions of relative deprivation are included in the analyses (see Tables 51 and 51a:b, Appendix A), old age remains a significant positive predictor of subjective well-being in two of the three data sets (1979, 1981). However, health and income no longer tend to emerge as significant predictors, suggesting that such perceptions may mediate the effects of objective (income and health) on subjective well-being.

For the most part, the impact of perceived advantage or disadvantage relative to others is found to be similar regardless of age and income or health levels. In 1977, positive perceptions of well-being relative to others have a significantly greater positive impact on the subjective well-being of middle-aged adults with low levels of income than they do

Table 51

Mean Levels of Subjective Well-Being by Income and Health Adjusted for Controls, with Age Group and Perceived Relative Deprivation as Covariates

Sample Income/ Health	Age Group and Perceived Deprivation								
	35 - 49			50 - 64			65+		
	W	S	B	W	S	B	W	S	B
1977:									
Lo income	26.8	23.1	28.1	21.6	22.9	34.5	23.6	26.8	36.9
Av income	24.4	25.2	31.0	21.9	26.9	30.2	26.0	25.1	33.5
Short1	23.2	23.5	31.2	18.3	28.4	29.9	16.4	30.5	28.4
Short2	22.5	25.7	26.8	20.1	27.6	30.5	37.6	29.1	28.9
Short3	24.1	17.9	28.7	18.3	21.6	27.8	23.8	25.6	30.6
Longterm1	19.0	25.4	28.5	25.4	23.5	30.3	28.9	18.8	32.7
Longterm2	19.4	22.5	27.0	23.5	32.4	25.4	25.5	19.5	30.1
1979:									
Lo income	5.5	7.3	8.1	2.9	7.5	7.8	6.7	8.1	8.4
Av income	5.6	7.2	8.6	4.0	7.2	8.8	5.1	8.3	8.0
Short1	5.1	6.4	7.8	5.3	6.4	7.5	6.9	6.5	7.6
Short2	3.8	6.1	7.0	3.8	5.3	7.4	6.1	5.7	6.1
Short3	4.8	5.8	6.6	4.0	5.6	6.7	6.1	7.2	9.8
Short4	3.0	4.3	5.6	3.4	4.8	8.1	6.6	5.8	5.0
Longterm1	3.4	7.3	8.4	5.5	6.1	8.5	8.0	8.0	8.9
Longterm2	5.8	7.4	9.1	4.6	7.1	8.6	8.9	7.7	7.9
Longterm3	5.5	6.5	8.9	3.7	6.4	5.9	5.5	6.6	6.7
1981:									
Lo income	2.5	6.0	7.8	3.1	7.1	7.0	6.9	7.5	9.4
Av income	3.3	5.9	7.7	4.5	7.2	8.3	6.7	7.0	8.9
Short1	4.2	6.9	7.5	8.0	6.4	7.1	7.9	6.9	8.2
Short2	4.0	6.6	7.0	6.8	5.6	6.4	5.7	5.8	8.0
Short3	3.7	6.4	6.4	8.3	5.6	6.6	6.1	7.2	8.3
Short4	3.4	5.7	6.1	6.4	5.5	7.1	4.8	5.6	6.3
Longterm1	3.3	6.0	8.3	4.1	7.4	7.9	6.9	7.4	8.3
Longterm2	3.1	5.4	7.8	2.4	6.4	8.2	7.1	7.5	8.3
Longterm3	3.0	5.2	7.9	3.3	6.8	7.4	6.3	6.0	8.8

W = worse; S = similar; B = better

on the other age/income groupings. In the 1979 analyses, positive perceptions of well-being relative to others offset the negative implications of chronic illness conditions, also among the middle-aged. In neither case are these findings evident in either of the other data sets. Moreover, there is no indication that perceptions of advantage relative to others serve to enhance the subjective well-being of older adults with low levels of income or high levels of illness and thereby, explains the slightly greater subjective well-being found among older individuals.

In 1981, old age no longer emerges as a significant and positive predictor of subjective well-being when perceived justice (and its interactions with age and income or health) is entered into the analyses (see Table 52 and Tables 52a:b, Appendix A). This suggests that the tendency of older adults to perceive their situations positively relative to what they feel they deserve may, to some degree, account for their greater subjective well-being across levels of income and health status.

Numerous significant interactions also emerge, particularly in the 1977 and 1981 data. Few of these interactions are, however, found to be consistent across two or more of the three sets of analyses. Those that are suggest that positive perceptions of well-being relative to what respondents felt they deserved to have offset (buffered) the otherwise negative effects of low income levels (in 1979 and 1981) as well as the negative implications associated with chronic illness, particularly among the old (1977, 1981). Perhaps as a result, they may also contribute to findings indicating age is no longer a significant predictor of subjective well-being.

Table 52

Mean Levels of Subjective Well-Being by Income and Health Adjusted for Controls, with Age Group and Perceived Justice as Covariates

Sample Income/ Health	Age Group and Perceived Justice								
	35 - 49			50 - 64			65+		
	W	S	B	W	S	B	W	S	B
1977:									
Lo income	20.9	22.3	28.0	23.3	27.1	29.8	30.2	24.5	34.2
Av income	25.6	24.6	28.4	23.3	24.2	30.1	28.8	24.5	28.6
Short1	20.9	21.3	28.9	25.9	28.7	30.4	14.5	38.0	24.5
Short2	18.3	19.9	31.8	24.9	28.8	29.2	29.6	29.4	25.7
Short3	25.4	16.7	23.4	23.2	22.8	24.7	15.9	26.7	31.3
Longterm1	21.8	21.3	26.8	26.5	30.0	26.7	25.7	29.0	25.1
Longterm2	5.2	27.6	24.3	29.3	26.2	24.3	23.7	29.9	24.3
1979:									
Lo income	5.9	5.8	8.0	2.7	6.8	7.8	7.8	7.3	9.2
Av income	6.9	6.3	8.1	4.4	7.5	7.4	9.2	7.6	8.6
Short1	6.5	5.2	7.4	4.5	6.4	7.0	8.9	7.0	7.2
Short2	4.9	4.5	6.9	3.9	5.9	6.4	7.7	6.0	5.6
Short3	4.6	5.3	6.7	3.2	5.7	6.3	9.0	6.3	8.5
Short4	4.2	3.8	8.1	2.3	5.4	5.4	8.1	4.1	5.8
Longterm1	4.8	6.2	8.2	2.8	8.2	6.4	6.3	7.4	9.9
Longterm2	5.6	5.5	8.9	4.6	7.3	7.3	6.9	8.0	8.9
Longterm3	6.1	5.5	8.7	3.3	7.7	5.1	4.4	7.1	7.0
1981:									
Lo income	4.9	4.5	8.1	4.9	6.4	7.7	5.1	8.6	8.9
Av income	4.6	4.7	7.8	5.7	6.8	8.5	5.6	8.2	9.0
Short1	5.4	5.4	7.8	7.7	6.1	7.1	5.2	7.8	8.3
Short2	4.5	5.0	7.3	6.3	5.7	6.3	4.3	7.3	7.2
Short3	5.5	3.8	7.7	7.9	5.2	7.5	5.3	7.5	7.5
Short4	4.8	3.0	5.8	7.1	5.1	6.2	3.4	8.2	5.3
Longterm1	7.3	4.6	8.8	5.2	6.3	8.6	5.1	7.9	9.0
Longterm2	5.7	4.2	8.6	3.7	6.1	8.2	4.5	7.6	9.1
Longterm3	6.4	5.3	5.2	5.2	6.3	7.2	1.9	6.7	9.4

W = worse; S = similar; B = better

Somewhat similar findings emerge when perceptions of attainment relative to either aspirations or expectations are employed as covariates (see Tables 53 and 54; also Tables 53a:b, 54a:b, Appendix A). Old age ceases to be a significant predictor of subjective well-being (in 1981). However, no significant and consistent pattern of interactions among age group, perceptions of attainment, and income or health status is found.

Finally, when perceptions of personal efficacy are taken into account, the findings differ depending upon the particular data set involved (Table 55; also see Tables 55a:b, Appendix A). In 1977, controls for the effects of personal efficacy and its interactions with age, income and health result in increasing to significance the impact of old age on subjective assessments of well-being. However, this is not apparent in either 1979 or 1981. In these data, neither age nor perceptions of personal efficacy assume significance.

4. Summary and Discussion

Whereas initial findings revealed that older adults assessed their overall life situations more positively than did those in the younger age groups, the magnitude of the differences was extremely small. As a result, for the most part they failed to emerge as significant in the regression analyses. Once again, therefore, these analyses would appear to provide only limited support to the basic assumption underlying both the accommodation and false consciousness models; that is, that older individuals tend to be less responsive to their objective conditions of well-being than those who are younger. Rather, these data suggest that older adults, for the most part, assess their overall well-being similarly

Table 53

Mean Levels of Subjective Well-Being by Income and Health Adjusted for Controls, with Age Group and Perceived Attainment (Aspirations) as Covariates

Sample Income/ Health	Age Group and Perceived Attainment: 35 - 49 W	35 - 49 S	35 - 49 B	50 - 64 W	50 - 64 S	50 - 64 B	65+ W	65+ S	65+ B
1977:									
Lo income	20.3	25.6	33.7	24.1	23.3	34.9	24.0	31.6	34.6
Av income	23.3	28.2	31.5	25.2	24.7	32.6	20.6	26.5	32.2
Short1	24.7	27.7	30.2	24.5	26.4	38.1	12.1	31.3	28.5
Short2	19.5	26.6	31.1	24.1	26.0	35.3	22.2	31.5	25.2
Short3	21.2	23.9	28.5	25.2	22.2	23.1	15.6	20.8	30.1
Longterm1	21.7	27.4	31.4	26.5	25.0	32.0	25.8	30.5	26.8
Longterm2	27.4	23.1	23.6	29.4	21.8	27.3	22.1	32.0	23.8
1979:									
Lo income	7.6	6.0	8.4	5.2	5.8	7.6	6.0	7.7	8.5
Av income	6.8	6.7	9.0	6.7	6.6	7.1	3.4	8.0	8.4
Short1	6.0	5.9	7.7	6.8	6.3	6.2	8.2	5.9	7.5
Short2	5.0	5.1	7.2	5.7	5.1	6.0	7.4	5.5	6.0
Short3	5.2	5.6	6.1	5.9	5.4	5.3	6.3	6.3	8.4
Short4	3.6	4.4	.	5.2	4.9	3.9	7.1	4.3	5.2
Longterm1	5.7	6.2	9.6	8.2	6.0	6.7	5.0	8.4	8.6
Longterm2	6.5	6.4	10.8	8.0	7.2	5.9	5.7	7.6	8.0
Longterm3	6.3	6.6	9.2	6.3	5.6	5.8	3.0	6.4	6.5
1981:									
Lo income	4.2	6.2	7.3	5.0	6.6	7.2	6.8	7.6	8.8
Av income	4.4	6.1	8.3	6.5	7.2	8.0	7.0	7.2	8.1
Short1	4.5	6.6	7.6	6.8	6.2	7.4	7.1	7.1	8.1
Short2	4.6	6.3	6.8	5.7	5.9	5.6	5.9	5.4	8.1
Short3	4.9	5.6	9.2	6.3	5.7	7.2	8.0	6.6	7.5
Short4	4.0	5.4	2.2	4.3	5.2	6.3	4.1	6.5	6.0
Longterm1	5.9	6.3	8.7	3.1	7.2	8.0	7.8	8.0	7.5
Longterm2	4.9	5.8	8.1	3.0	6.7	8.6	5.5	7.6	7.8
Longterm3	4.8	5.9	1.4	4.3	6.5	6.8	4.1	7.2	7.3

W = worse; S = similar; B = better

Table 54

Mean Levels of Subjective Well-Being by Income and Health Adjusted for Controls, with Age Group and Perceived Attainment (Expectations) as Covariates

Sample Income/ Health	Age Group and Perceived Attainment								
	35 - 49			50 - 64			65+		
	W	S	B	W	S	B	W	S	B
1977:									
Lo income	20.3	22.0	29.7	32.9	24.0	27.4	7.2	28.8	33.7
Av income	24.7	24.7	30.9	33.0	24.1	27.9	7.3	31.1	31.1
Short1	18.0	25.5	32.5	38.8	23.0	27.9	.	22.8	30.5
Short2	21.5	25.3	25.4	33.1	26.3	27.4	20.4	18.7	30.4
Short3	16.5	21.8	29.5	34.6	21.4	22.4	8.7	12.8	30.9
Longterm1	20.9	25.6	29.0	35.7	23.5	26.6	23.8	26.8	28.1
Longterm2	40.7	27.0	17.8	44.4	22.0	25.8	12.6	30.3	24.4
1979:									
Lo income	6.5	6.2	7.5	5.0	8.1	6.7	7.6	10.5	8.2
Av income	5.8	6.7	7.0	6.2	8.2	7.1	6.5	12.6	8.2
Short1	5.1	6.0	7.1	6.2	8.2	6.2	8.4	15.2	7.1
Short2	4.6	5.6	6.0	5.4	5.9	5.7	9.7	12.8	5.8
Short3	3.8	5.4	6.2	4.8	7.4	5.4	9.2	11.0	8.3
Short4	2.9	6.6	3.4	3.9	8.6	3.7	2.3	10.5	5.9
Longterm1	5.5	5.7	7.9	7.6	8.8	6.2	10.5	15.2	8.3
Longterm2	5.6	6.2	9.0	6.7	9.8	6.6	6.5	12.1	7.7
Longterm3	7.0	5.4	8.0	6.4	6.7	5.1	5.3	10.3	5.9

W = worse; S = similar; B = better

Table 55

Mean Levels of Subjective Well-Being by Income and Health Adjusted for Controls, with Age Group and Perceived Efficacy as Covariates

Sample Income/ Health	Age Group and Perceived Efficacy								
	35 - 49			50 - 64			65+		
	L	A	H	L	A	H	L	A	H
1977:									
Lo income	20.1	28.2	27.3	21.6	24.7	35.5	25.1	38.2	33.1
Av income	24.5	28.6	28.6	25.1	24.0	32.6	22.2	30.8	32.5
Short1	22.0	28.2	28.8	22.4	14.9	39.0	12.1	20.5	37.6
Short2	19.6	23.6	32.9	27.7	21.5	32.8	23.2	29.3	28.3
Short3	16.2	33.7	27.1	21.4	20.3	24.8	19.5	22.6	31.1
Longterm1	24.8	26.5	25.2	27.4	22.7	30.1	22.8	29.6	30.7
Longterm2	21.7	22.5	24.6	30.0	20.9	27.6	22.8	22.8	32.1
1979:									
Lo income	5.5	7.0	7.3	4.8	7.1	8.1	7.8	6.8	9.0
Av income	5.5	7.5	7.4	5.4	7.1	7.7	7.7	7.1	8.3
Short1	5.5	6.0	6.9	5.1	7.3	7.3	6.3	7.6	7.0
Short2	4.0	5.8	6.5	4.3	7.0	6.2	5.2	6.1	6.1
Short3	3.5	6.9	5.9	3.6	6.5	6.0	5.4	10.1	8.0
Short4	3.1	4.9	0.7	3.9	5.4	7.7	4.8	5.1	5.5
Longterm1	5.6	7.5	7.2	2.8	7.0	7.6	8.3	6.0	10.1
Longterm2	4.6	7.4	8.0	4.3	7.4	8.7	8.8	5.7	8.6
Longterm3	5.1	7.2	8.7	2.7	5.7	8.0	7.1	5.2	6.4
1981:									
Lo income	5.7	5.5	6.6	6.2	6.5	7.9	8.8	9.8	8.4
Av income	5.8	5.6	7.2	6.9	7.9	8.3	8.0	9.2	8.8
Short1	6.4	5.5	7.8	6.0	6.9	7.4	7.4	8.4	8.3
Short2	5.7	6.2	6.7	5.8	6.2	6.3	6.4	9.6	5.7
Short3	5.9	6.1	5.2	5.9	6.2	7.1	7.2	9.2	7.2
Short4	5.2	3.2	6.4	5.2	4.0	6.8	6.2	7.2	4.9
Longterm1	7.1	5.6	7.7	5.3	7.5	8.6	8.0	8.3	8.7
Longterm2	5.6	5.6	7.8	5.7	6.5	8.9	6.8	8.4	10.5
Longterm3	5.1	5.5	7.6	5.8	5.7	8.2	5.3	9.3	8.9

L = low; A = average; H = high

to those aged 35-49 and 50-64, given similarities in levels of income and health as well as education and marital status. As well, few consistent differences were found in the impact of income and health on subjective assessments of well-being across the age groups. Some evidence was found to suggest older respondents were somewhat less responsive than others to low income levels (1977 and 1981) but somewhat more vulnerable to higher levels of chronic illness (1979).

Exploratory analyses conducted to assess the role of perceptual factors on relationships between objective (income and health) and subjective well-being within the different age groups revealed few consistent findings.

Older adults, as noted, did not differ from those in the younger age groups with regard to overall perceptions of relative deprivation or personal efficacy. As well, the findings revealed the inclusion of such perceptions into the analyses did little to explain age-related differences in subjective well-being (where such differences existed). Those who perceived their situations more positively relative to others also had significantly higher levels of subjective well-being than those who perceived their situations in more negative terms. (The impact of personal efficacy on subjective well-being was less clear.) However, there was no indication that perceptions of advantage relative to the average Canadian assumed greater importance for older adults and particularly, for those with lower incomes and worse health.

In contrast with these findings, perceptions of justice and attainment relative to aspirations and expectations, which were more positive among older adults, did reduce the impact of old age on

subjective well-being to nonsignificance.

A number of interaction effects were observed. However, no evidence was found to indicate that perceptions of attainment were particularly beneficial to older adults, particularly those with extremely low incomes or poor objective health. This was not the case with regard to perceptions of equity or justice however, where the findings revealed somewhat more positive implications of positive perceptions for those with low incomes (at all ages - 1979, 1981) and those with high levels of chronic illness (among older adults - 1977, 1981).

On one hand, these findings would appear to offer some support for both the accommodation and false consciousness models. Findings that suggest that whatever differences exist in levels of subjective well-being of older and middle-aged or younger individuals reflect the more positive perceptions older adults tend to have regarding the comparability of their own current situations and those they perceive they either deserve to have or expect and aspire to have in the future could be regarded as providing a measure of support for the false consciousness model. However, findings pointing to the more positive implications of positive perceptions of justice for the subjective well-being of those with lower incomes (many of whom are old) as well as of those who are old with higher levels of chronic illness also offer some support for the accommodation interpretation. Overall, however, little support is found for the basic premise underlying both models; that is, that older individuals tend to be less responsive to features of their objective life situations than do those who are younger.

Chapter IV

THE MEANING OF DEPRIVATION AND DISCONTENT IN THE LIVES OF ELDERS

Overall, the findings reported in the previous chapter reveal only limited support for previous research indicating a positive relationship between age and subjective well-being. As well, they provide very little support for the view that age-related differences exist in terms of the impact of objective conditions on subjective assessments of well-being. Finally, they provide little indication that either the accommodation or false consciousness models, as these were formulated in Chapter I, serve to account for age-related differences in subjective well-being.

A positive relationship between age and subjective well-being was confirmed with regard to income but only at the aggregate level. Older adults, it seems, have lower levels of income but higher levels of subjective economic well-being than those in younger or middle-aged groups. In terms of health, in contrast, older adults appear to perceive their conditions more negatively than those in the younger age groups.

The view that age-related differences exist in terms of how individuals within different age groups respond to features of their objective life situations with older adults being less vulnerable to the negative impact of poor objective conditions was not supported. Rather, analyses conducted at the individual level provided no evidence of interaction between age and objective indicators of well-being in either domain (income, health) within any of the three data sets examined. Both age and objective conditions appear to influence subjective well-being.

However, their effects are direct and/or indirect rather than interactive in nature.

When the impact of perceptual variables (including perceptions of attainment, relative deprivation, distributive justice, and personal efficacy or control) was examined, it was found that older adults in general perceived less disparity between their current situations and their aspirations and expectations for the future as well as what they felt they deserved to have when compared with those in the younger age groups. These differences, in turn, were found to account (either in whole or in part) for age-related differences in subjective assessments of economic well-being. However, little effect of any of the perceptual variables on subjective assessments of health was found.

Findings of this nature have implications for an understanding of the meaning of deprivation and discontent in the lives of elders. For example, as noted previously, they suggest that age-related patterns of well-being vary and are not consistent and therefore, generalizeable across all domains of well-being. As well, they suggest that in contrast with assumptions frequently encountered within the gerontological literature, older individuals are no less responsive to the impact of objective situational conditions (specifically health and income) than are those in other (younger) age groups.

Given that older individuals respond in the same way to objective conditions of health and income as do those who are younger, why is it that: (a) as a group, they nevertheless perceive their economic situations more positively relative to aspirations, expectations, and to what they deserve and consequently, appear to experience more positive subjective

economic well-being at all levels of income; and (b) as a group, and regardless of objective health status, perceive their health more negatively than those in other age groups?

One possible explanation is that such findings ultimately reflect the impact of culturally-based norms and values. It is widely noted, for example, that ours is a culture that values individualism, independence and self-sufficiency. According to Usui (1989), for example, modern industrial societies are in fact built on an "ideology of individualism" that conceives of individuals as being capable and competent to manage their own affairs. As noted by Meyer (1988: 50):

> in modern industrialist societies ... the individual and the life course are socially constructed. The point of view of the individual is highly developed ideologically and valued socially; in fact, the collective good is defined in terms of individual development and welfare.

In the economic arena specifically, values stressing individualism appear to be expressed in relation to a "market ethos" that leaves individuals (and their families) to care for themselves. As noted by Chappell (1980:35), the working assumptions behind policy legislation (both currently and in the past) are those seeking to maintain values of independence and self-sufficiency. Individuals are considered to be "responsible for their own resources, for obtaining and retaining employment, and for providing for the contingencies of life ...". Along somewhat similar lines, Baum and Baum (1980) point out that the principle (norm) of differential reward for differential contribution or achievement is common to western industrial societies and rests on a model of a free market in which people compete and in which some fare better than others. This norm (distributive justice) justifies income inequality and further

specifies that the amount of the inequality should remain stable as each cohort moves from work into retirement.

Research evidence supports this view and suggests that North Americans of all ages believe in values of individual achievement, equal opportunity, effort, and merit and perceive their economic system to be one of equal opportunity with unequal rewards. Low income is seen to be a consequence of individual failure, particularly a lack of effort (Baum and Baum, 1980; Dowd, 1980). As well, the particular importance of independence, autonomy, and self-sufficiency in the lives of elders is widely reported (see, for example, Clark and Anderson, 1967; Eisler, 1984; Keith, Fry and Ikels, 1990).

According to Dowd (1980:117), much of the behaviour of older adults can be understood as a continuing effort to maintain their independence. In his view, the struggle to remain independent is a central fact in old age. Along similar lines, Clark and Anderson (1967:390) note:

> For most of this generation of older Americans, self-esteem is indelibly linked with the personal and cultural values of independence - autonomy and self-reliance. Yet old age in reality is often a time when one must have help and support in order to survive. This is the fundamental dilemma ... (T)he tragic contradiction that American culture generates for the elderly between these two basic goals is the major problem in adaptation to aging.

In their study, dependency (either physical or financial) was the most frequently-cited source of dissatisfaction and depression among older adults (reported as such by 60 percent of their sample). Finally, Arling and McAuley (1984:133) note that total independence is often not a realistic goal in old age. Economic and particularly, health limitations, frequently restrict opportunities for independence. For example,

chronically impaired elderly must learn to depend on others for help in meeting basic needs. As a result, these authors suggest that "having someone to depend upon, while avoiding excessive dependency is the basis for well-being and personal autonomy ... particularly in old age".

Research conducted by Keith, Fry and Ikels (1990) suggests, however, that learning to depend on others is likely to be inconsistent with North American cultural values. In comparing American and Chinese elders, these authors found the former to be more likely to refer to ill health as a particularly important reason for disliking old age and for viewing an older adult as doing poorly. This was so because of its link with dependence. Yet, in China, for example, older adults were found to be more likely to identify dependence, rather than independence, as a reason why an older person was doing well. According to these authors, this reflects the contrast between North American values of individualism and independence and Chinese values of filial piety and duty to others.

> In the ... American communities, the old are concerned that they <u>not</u> become dependent; the Chinese hope to raise proper children who <u>will</u> take care of them (Keith, Fry, and Ikels, 1990: 260).

Adherence to an "ideology of individualism" and the likelihood that older adults do accept personal responsibility for their own economic situations is further suggested by the following statements reported by Connidis (1987: 460-461) on the basis of responses to a question asking a sample of older individuals whether they felt any changes needed to be made in terms of services for older adults.

> ... (R)etired people in Canada are certainly well taken care of ... I don't feel that people should have everything dropped

> in their lap. I think you have to work for what you want in this world, and if you don't work for it, then things shouldn't be basically quite as easy as they should be for some people who have worked for it and saved for it (man of 68)

> Older people never had it so good. It gripes me to hear people say, 'we want this, we want that.' You've got to earn things for yourself" (man of 70).

> It seems to me that there is an awful lot being done to make life happier for seniors... What more do seniors want? Pretty soon they will not want to take care of themselves... (woman of 84).

To the extent that older adults value their independence and, at the same time, accept the 'market ethos' with its 'ideology of individualism', it is likely that they perceive what they have as being what they deserve to have given their past history of economic attainment. As a result, they are likely to accept personal responsibility for their own economic situations. This, in turn, according to the findings presented here, results in relatively positive assessments of subjective economic well-being at all levels of income.

To Dowd (1980) and others, this likely represents a situation of false consciousness. However, if so, it is a false consciousness that is divorced from the assumption that older adults are less aware of and

consequently, less responsive to their objective circumstances than are those in younger age groups.

A somewhat different though related situation would seem evident with regard to health. It is widely noted, for example, that a major concern about old age at both the individual and societal levels is a decline in health. In fact, it is to a large extent deterioration in health in old age that is associated with losses of individual independence and self-sufficiency in North American society (Chappell, Strain and Blandford, 1986; Connidis, 1987; Eisler, 1984).

However, unlike the emphasis on individual responsibility over outcomes that attends differences in economic well-being, ill health appears by and large to be viewed <u>not</u> as being an individual responsibility (although there are indications this may be changing - see Clark, 1987) but rather, as an inevitable part of the aging process. According to Stahl and Feller (1990:24), the meaning of old age is socially constructed and often confuses being old with being sick. They note a widespread inability to define old age independently of health.

At a more macro level, health also appears to be defined as being other than an individual responsibility. Like the economic system, the health care system is noted to be a cultural institution that implicitly incorporates the values, aspirations, and goals of the society (Mechanic, 1989). According to Chappell (1988), a striking feature of Canada's health care system is its focus on medical care. A medical focus, in turn, assumes a biomedical model of health and illness. According to this biomedical model, the causes of illness are seen as being biological in nature - specifically, "disease is accounted for by deviations from the

norm of measurable biological variables" (Chappell, 1988:147). Health, in turn, tends to be equated with good quality medical care (Chappell, 1987).

Given the apparent importance of values of independence and self-sufficiency to older adults (as well as to others in our society), the threat to independence that ill health may well represent, and the fact that health status is viewed as being something over which individuals are likely to feel they have relatively little influence, it seems reasonable to expect older adults to view their health status more negatively than those in other age groups. In short, for the older adult, the implications of ill health, given cultural values, are more severe and are perceived as such. The lesser responsibility felt by individuals for health than economic conditions may, in turn, result in a greater willingness by individuals to disclose health than economic conditions, thereby also accounting for the stronger relationship found between objective and subjective health than economic well-being.

Chapter V

DISCUSSION AND CONCLUSIONS

It has been remarked that "the most important and interesting aspects of community life are by their very nature paradoxical and that ... (the task of) researchers should be to 'unpack' and influence contemporary resolutions of paradox" (Rappaport, 1981:1). This same author notes there are two possibilities when confronted with paradox: either it represents a phenomenon that investigation reveals is well-founded despite the appearance of contradiction - a true paradox; or, it is revealed to be more apparent than real - a false paradox.

This study has examined an area in which reports of paradoxical findings prevail; that is, age-related differences in subjective well-being. A review of the literature revealed that, contrary to expectations, older adults as a group frequently assess their situations (including their work, housing, economic conditions, life as a whole, etc.) more positively than those in other age groups, despite in general encountering poorer objective conditions. The extent to which age-related (aggregate) differences in subjective well-being reflect differences in how those in different age groups respond to their objective life situations (as individuals) was assessed. In particular, relationships between objective and subjective assessments of health, economic and overall well-being were examined, comparing adults aged 65 and over with those aged 35-49 and 50-64.

1. Accommodation and False Consciousness as Explanations

Various explanations for the existence of age-related disparities between objective and subjective well-being were reviewed and from this review, two general and competing explanations or models for resolving the paradox were isolated. The first, termed the 'accommodation' model, asserts that older adults have accurate and realistic assessments of their situations when compared with those in other age groups. Findings indicating age-related disparities between objective and subjective assessments are attributed, within this model, to the effectiveness of the coping strategies employed by the elderly for coming to terms with (thereby accommodating themselves to) their situations.

In more or less direct contrast with the position adopted by the accommodation model is that of what was termed the 'false consciousness' model. According to its proponents, the tendency of older adults to assess their situations positively despite often poor objective circumstances is a reflection of their 'false consciousness' and inability to accurately perceive their own objective standing.

Secondary data drawn from three national sample surveys conducted by the Survey Research Centre, Institute for Behavioural Research at York University in 1977, 1979, and 1981 were used to empirically examine relationships between objective and subjective indicators of income, health, and overall well-being. The impact of age and various perceptual factors including perceptions of relative deprivation, justice, attainment (relative to aspirations and expectations) and personal efficacy or control on these relationships were also examined. This was done based

on the argument that both models assert the importance of such factors for an understanding of age-related disparities between objective and subjective well-being but nevertheless lead to very different expectations regarding the manner in which they operate.

The accommodation hypothesis suggests an interaction between objective circumstances and perceptions (of relative deprivation, justice, etc.) such that positive perceptions serve to offset the otherwise negative implications of poor objective well-being for subjective assessments among older adults. This, in turn, accounts for the differences observed in relationships between objective and subjective well-being when comparing older adults to those middle-aged or younger. The false consciousness argument implies that older adults in general, regardless of objective circumstance, perceive their situations positively and consequently, reveal positive levels of subjective well-being. It is therefore their more positive perceptions that differentiate them from younger and middle-aged adults and that account for age-related disparities between objective and subjective well-being.

2. Methodological Limitations

Unfortunately, several measurement problems were encountered when conducting the analyses. For example, in order to measure perceptions of relative deprivation, justice, and attainment (relative to both aspirations and expectations), it was necessary to rely on difference scores despite indications of their susceptibility to measurement error. Direct measures of these constructs were unavailable in the data sets

employed in the analyses. In addition, the use of residual scores to resolve some of the problem (i.e., removing correlated measurement error) proved not to be feasible. Relationships between the component variables used to arrive at the measures were fairly weak, yielding almost identical measures of each construct. Problems of limited reliability were also encountered with regard to the measurement of perceptions of personal efficacy or control. As well, measures of both objective and subjective well-being were somewhat weak.

Returning to the variables used to measure perceptions of relative deprivation, justice, and attainment, it is also important to bear in mind that, with a few exceptions, these questions were not asked with reference to particular domains of life. In only one of the data sets (1977) were the respondents asked both about the economic situations and overall life situations they felt: (a) they currently had; (b) the average person enjoyed; (c) they currently deserved to have; (d) they aspired to; and (e) they expected to have in the near future. In the 1979 and 1981 data, these questions were asked with regard to their perceptions of their overall life situations only. In none of the surveys were respondents asked such questions with regard to health.

3. Age Differences in Well-Being: Evidence Against the Anomaly

Despite these methodological shortcomings, several important findings nevertheless emerged. First, the results showed that, contrary to prevailing wisdom, older adults as a group do not appear to assess their health nor their overall life situations a good deal more positively

than do those in other, younger age categories, given similar levels of objective well-being. In terms of health, older adults were actually found to yield more negative assessments given similar objective status; that is, they report themselves to have poorer health and perceive their health to be poorer. The only indication that older adults might be somewhat more positive in their subjective assessments of health came as a result of findings indicating older adults were somewhat less responsive to (less negatively affected by) more severe long term chronic or disabling illness.

It may be that these findings reflect the fact that the measures of objective health status used in the analyses were inadequate to control for actual differences in health status. While it is not possible to rule this out, the analyses did include several different measures of health status, incorporating not only short-term acute conditions but also, long term illness and disability. In fact, in comparison with the relationships between income and subjective economic well-being (in which the amount of variance explained by income ranged from 6 percent to 11 percent), relationships between health and perceptions of health were relatively strong (with the amount of variance explained by health ranging from 32 percent to 38 percent).

Several reasons for the difference in the strength of relationships between objective and subjective well-being can be suggested. First, objective economic well-being was measured using a single indicator - income - which arguably may be less suitable (valid, reliable) for summarizing objective economic circumstances than the multiple indicators (i.e., short- and long-term illness conditions) used to measure objective

health status. It can be argued that income (adjusted for family size) is not sufficiently sensitive as a true measure of economic standing and that other assets (including investments, home equity, etc.) and expenses (including education, child care, health, etc.) need to be considered as well. Finally, as suggested in Chapter IV, it may be that such factors as the accuracy of recall and the willingness to disclose accurate information are greater for health than for economic indicators.

With regard to overall assessments of subjective well-being, the analyses indicated age-related differences (with older adults yielding more positive assessments) but they were not only inconsistent but tended to be extremely small in magnitude. As well, there was some indication that older adults were less responsive to the negative implications of lower income levels than were those in the younger age groups, suggesting that among those with lower income levels, older adults might have somewhat higher subjective well-being. However, this was not evident across all three data sets.

Overall, these findings would appear to undermine claims regarding the generalizeability of age-related differences in relationships between objective and subjective well-being and suggest that, in some important respects, the paradox is more apparent than real.

4. The Ecological Fallacy and Older Adults as Realists

Although a positive relationship between age and subjective assessments of economic well-being was confirmed, there was a lack of support for conclusions regarding the existence of age-related disparities

between objective (income) and subjective economic well-being. Findings drawn from comparisons conducted across age groups (i.e., aggregate level analyses) revealed that, as expected, older adults had lower average levels of income but higher levels of subjective economic well-being than those in the middle-aged or younger age groups. However, the relationship between objective and subjective economic well-being assessed at the individual level, was found to be positive (albeit somewhat weak) not only among younger and middle-aged adults but among older adults as well. Furthermore, no evidence was found to indicate an interaction between age group and income level in affecting subjective feelings of economic well-being, thereby confirming that older individuals are no less responsive to the effects of objective on subjective economic well-being than are those in other age groups.

Assumptions to the effect that because older adults as a group have worse objective but better subjective well-being than do younger adults, they are also less responsive as individuals to the influence of objective situational conditions therefore reflects an "ecological fallacy" whereby inferences about one unit of analysis (e.g., individuals) are made on the basis of the examination of another (e.g., age groups). As noted by Blalock (1964:98):

> in shifting from one unit of analysis to another we are likely to affect the manner in which outside and possibly disturbing influences are operating on the ... variables under consideration.

The finding that older and younger individuals are equally responsive to objective features of their economic situations counters the

basic premise upon which both the accommodation and false consciousness explanations, as originally outlined, are based; that is, that age-related disparities exist in terms of relationships between objective and subjective dimensions of well-being. The 'false consciousness' model, as described, holds that older adults generally are comparatively unresponsive to features of their objective life situations with their false consciousness effectively distorting their perceptions of reality. The accommodation model, in contrast, implies that older individuals, particularly those in poor objective conditions, are less responsive to objective conditions due to effective attempts at coping.

The findings reported here suggest elderly individuals, including those in relatively poor economic conditions, respond in the same way as younger individuals to their objective economic circumstances as well as their health. However, the fact that they maintain more positive levels of subjective economic well-being at all levels of objective well-being suggests the need to attend to other factors (or "disturbing influences" - Blalock, 1964) that may account for the differences observed.

In these data, evidence was found to suggest that older individuals are no more or less likely to perceive themselves as being deprived relative to others than are those in the other two age groups. Nor were differences found in overall levels of perceived self efficacy. Older adults were, however, found to be somewhat less likely to perceive their situations negatively relative to what they felt they deserved to have and particularly, to what they expected and aspired to have in the future.

Each of the perceptual variables emerged as being a significant predictor of subjective economic well-being, mediating to some extent at

least the effects of objective economic resources (income) on subjective well-being. When perceptions of justice or equity were entered into the analyses, age group differences in subjective economic well-being no longer emerged as significant in at least one of the data sets (1977 - remaining significant in the other two - 1979, 1981). Similar findings were evident when using perceived attainment as a covariate. Finally, when the impact of perceptions of personal efficacy was examined, the findings revealed old age no longer emerged as a significant positive predictor of subjective assessments of economic well-being in the 1977 data but remained significant within both of the others.

5. Implications

The implications of these findings would seem to vary somewhat depending upon the particular data set involved. Using data drawn from the 1977 survey, the findings suggest that in terms of economic well-being, it is the tendency of older adults to perceive their situations more positively than those in the younger age groups relative to either: (a) what they feel they deserve to have; and (b) what they expect and aspire to have in the future that largely accounts for age-related differences in subjective well-being. There was no evidence to indicate that the primary means by which positive perceptions of justice or attainment served to enhance subjective well-being among older adults was by offsetting (modifying or buffering) the otherwise negative implications of low incomes.

These findings would appear to support the need for an explanatory

model focusing on differences in perceptions, particularly of attainment assessed relative to future aspirations and expectations. As noted, older adults respond in the same way as younger adults to differences of objective economic well-being. Moreover, they perceive their situations more positively relative to (lowered) aspirations and expectations for the future as well as to (lowered) expectations of what they deserve to have given past attainments. They do not, however, perceive their situations more positively relative to the average person living in Canada.

It can be argued that such differences in perception are entirely realistic. Opportunities for economic improvement change over the life course, become increasingly restricted and apparently, are perceived as such, in old age. As well, the realization that one is doing (will do) better than one might earlier have expected (given predominantly negative views of the economic situations of older adults in our society) seems appropriate.

As noted in Chapter IV, modern industrial societies such as ours place a high value on concepts of individualism and self-sufficiency. Individuals are considered to be capable and therefore, responsible for creating the economic conditions of their own lives, including those in old age. As a result, it was suggested that older adults likely accept responsibility for their own economic situations. Given the lack of opportunities for enhancing economic well-being in old age, their positive perceptions of attainment and distributive justice result in positive assessments of well-being.

Support for this interpretation is less clearly indicated on the basis of findings drawn from the 1979 and 1981 than 1977 surveys. As

noted, in the 1979 and 1981 data, old age remained a significant and positive determinant of subjective economic well-being despite controls for perceived justice and attainment.

Ultimately, conclusion on the basis of disparate findings such as these is difficult. Further research is necessary. Nevertheless, in one sense, the discrepancy between the findings is not all that surprising. Respondents interviewed in 1977 were asked specific questions targeted toward determining their perceptions of distributive justice, attainment, and relative deprivation with regard to economic criteria specifically. However, those interviewed in both 1979 and 1981 were asked similar questions but directed towards their overall life situations. Given the focus of the investigation on relationships between income and subjective economic well-being, the greater significance of economically focused perceptions is to be expected. In each case, the amount of variance in subjective economic well-being accounted for by perceptions of relative deprivation, justice, and attainment was highest in the 1977 data. It is therefore concluded that these data offer preliminary support for a cultural or perhaps, false consciousness model, modified so as not to assume age-related differences in how individuals respond to objective conditions. This is, however, in need of further verification.

Findings indicating that it is age-related differences in levels of perceived economic justice or attainment that appear to account for the tendency of older individuals to assess their economic situations more positively than those middle-aged or younger should not necessarily be taken to mean that perceptions of relative deprivation and personal efficacy are unimportant for subjective assessments of economic well-

being. Nor do they necessarily rule out the fact that such factors serve to enhance coping through buffering the otherwise negative implications of poor objective conditions.

Additional findings reveal perceptions of both relative deprivation and personal efficacy are significant and positive predictors of subjective economic well-being. Perceptions of relative deprivation also served to account for the effects of income on subjective economic well-being. Such perceptions emerged as being particularly important for enhancing subjective well-being among those who were middle-aged or younger rather than old. Finally, among adults with low objective economic resources, there was some indication that it is among middle-aged and older adults that perceptions of positive advantage relative to others emerges as particularly important for enhanced feelings of economic well-being.

The differences in the findings obtained when using perceptions of relative deprivation as opposed to perceptions of justice or attainment in these analyses suggest that individuals may well be more likely to assess their situations positively relative to one standard (e.g., distributive justice) if they also perceive their situations positively relative to some other standard (such as relative deprivation). Yet, such standards of comparison are by no means synonymous with one another and, as a consequence, may function quite differently in terms of relationships involving age, objective and subjective well-being.

In terms of health, the findings suggest a negative relationship between age and subjective assessments that is, once again, evident across levels of objective well-being. Given the importance of values such as

independence and self-sufficiency in our society, this may well be due to the fact that ill health is viewed as a major threat to the maintenance of independence in old age.

Overall, the findings reported here highlight the relatively complex nature of the relationships involving objective and subjective well-being as these vary in association with age. The need to focus attention on particular domains of life is clear as is the need to consider age-related differences in the perceptions people have regarding their situations. Further research is needed to verify the findings as well as to continue to sort through the complexities of the relationships across age categories and domains of life. It is only when such relationships are better understood that appropriate response in terms of social policy becomes possible. Contradictory, disparate, and paradoxical findings make interpretation and therefore translation into policy both difficult and potentially dangerous.

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Appendix A

Supplementary Tables

Table 8a

Positive and Negative Well-Being Factor
Loadings by Age Group

Items	Positive Factor			Negative Factor		
	35-49	50-64	65+	35-49	50-64	65+
Boring	.23	.20	.26	.69	.66	.68
Satisfying	.60	.66	.54	.14	.26	.13
Lonely	.09	.15	.08	.49	.48	.49
Organized	.51	.60	.41	.06	.08	.10
Useless	.11	.13	.19	.72	.74	.73
Happy	.65	.81	.67	.17	.24	.32
Comfortable	.74	.73	.67	.17	.10	.13
Meaningless	.15	.19	.19	.76	.73	.73
Ideal	.73	.62	.69	.17	.33	.30
Disappointing	.29	.30	.26	.66	.74	.82
Capable	.57	.61	.24	.21	.20	.17
Disgusting	.23	.24	.32	.80	.80	.72
Active	.53	.60	.26	.15	.20	.25
Good	.73	.69	.60	.25	.33	.26
Eigenvalue	4.97	5.64	1.29	1.67	1.58	5.42
% of variance	35.5	40.3	9.2	11.9	11.3	38.7

Table 11a

Factor Loadings and Commonality Estimates for Subjective Well-Being Measures by Age Group: 1979, 1981

	1979		1981	
	Factor Loading	h^2	Factor Loading	h^2
Ages 35 to 49:				
Happy	.67	.45	.75	.56
Enjoy Life	.70	.49	.76	.57
Depressed	.56	.31	.58	.34
Eigenvalue		1.25		1.48
% of variance		41.8		49.3
Ages 50 to 64:				
Happy	.72	.52	.63	.39
Enjoy Life	.74	.54	.66	.44
Depressed	.54	.29	.56	.31
Eigenvalue		1.36		1.14
% of variance		45.2		38.0
Ages 65 and Over:				
Happy	.56	.32	.67	.45
Enjoy Life	.80	.64	.76	.57
Depressed	.61	.37	.69	.47
Eigenvalue		1.33		1.50
% of variance		44.3		49.9

Table 30(a)

Regression of Perceived Economic Well-Being on Income Groups by Age Group - 1977, 1979, 1981

Sample	Age Group					
	35 - 49		50 - 64		65+	
Income	b	beta	b	beta	b	beta
1977:						
lo inc	-23.48	-.35***	-28.54	-.35***	-16.36	-.23***
av inc	-10.10	-.14***	-12.34	-.16***	-9.35	-.13
a	69.86		73.25		77.49	
R^2(adj)		.09		.11		.03
1979:						
lo inc	-12.69	-.19***	-17.33	-.27***	-20.08	-.32***
av inc	-7.69	-.13***	-6.79	-.11*	-13.19	-.18*
a	68.80		71.54		82.98	
R^2(adj)		.03		.06		.06
1981:						
lo inc	-23.47	-.37***	-20.84	-.31***	-18.39	-.28***
av inc	-14.74	-.26***	-13.44	-.22***	-13.71	-.21**
a	69.27		72.00		80.98	
R^2(adj)		.12		.10		.05

***p<.001; **p<.01; *p<.05

Table 30(b)

Regression of Subjective Economic Well-Being on Income, Age Group, and Interactions

	1977		1979		1981	
	b	beta	b	beta	b	beta
low income	-23.52	-.32***	-12.99	-.21***	-23.80	-.36***
avg income	-10.14	-.14***	-7.99	-.13***	-13.47	-.22***
age 65+	8.64	.10*	15.47	.21***	14.12	.20***
age 50-64	3.27	.05	3.75	.06	2.19	.04
age65+ * lo inc	6.20	.05	-7.55	-.07	4.10	.04
age50-64 * lo inc	-4.61	-.04	-5.96	-.06	3.67	.03
age65+ * avg inc	-.36	-.00	-6.43	-.05	-1.80	-.02
age50-64 * avg inc	-2.10	-.02	.18	.00	1.89	.02
a	69.63		68.43		69.16	
R^2(adj)		.09		.06		.11
F	22.70		15.33		27.94	

*p<.05; **p<.01; ***p<.001

Table 31(a)

Regression of Perceived Economic Well-Being on Income Groups and Controls by Age Group - 1977, 1979, 1981

Sample	Age Group 35 - 49		50 - 64		65+	
Predictors	b	beta	b	beta	b	beta
1977:						
lo inc	-21.34	-.31***	-30.13	-.37***	-17.17	-.24***
av inc	-9.42	-.13***	-14.54	-.19***	-9.65	-.13
female	6.65	.10**	-0.37	-.01	-1.12	-.02
married	.50	.01	9.20	.10*	-2.82	-.04
education	2.15	.09*	-2.92	-.11*	-1.27	-.05
a	59.24		73.52		83.05	
R^2(adj)		.11		.12		.02
1979:						
lo inc	-11.27	-.17***	-14.28	-.22***	-20.73	-.33***
av inc	-7.98	-.14***	-4.72	-.07	-13.16	-.18*
female	5.15	.09*	-2.17	-.04	8.63	.13*
married	6.09	.07*	10.49	.14***	6.38	.09
education	1.15	.08*	1.37	.09*	-0.61	-.03
a	54.72		56.48		77.53	
R^2(adj)		.05		.09		.07
1981:						
lo inc	-20.96	-.33***	-19.42	-.29***	-23.90	-.37***
av inc	-13.84	-.24***	-11.84	-.19***	-18.52	-.28***
female	5.22	.10**	2.25	.04	7.31	.12*
married	3.20	.04	12.90	.18***	7.40	.11
education	1.86	.12***	1.49	.10*	-2.92	-.17*
a	53.44		52.82		87.45	
R^2(adj)		.14		.13		.08

***p<.001; **p<.01; *p<.05

Table 31 (b)

Regression of Subjective Economic Well-Being on Income, Age Groups, Interactions, and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
low income	-23.80	-.33***	-11.80	-.19***	-22.81	-.35***
avg income	-10.78	-.14***	-8.49	-.14***	-13.66	-.22***
age 65+	10.09	.12*	18.36	.25***	16.20	.23***
age 50-64	3.51	.05	4.20	.07	3.02	.05
age65+ * low inc	5.80	.05	-8.38	-.08	3.55	.03
age50-64 * low inc	-4.52	-.04	-6.11	-.06	2.39	.02
age65+ * avg inc	-.73	-.00	-5.48	-.04	-.51	-.00
age50-64 * avg inc	-1.66	-.01	1.50	.01	2.19	.02
female	2.97	.04	2.89	.05*	4.04	.07**
married	4.02	.04	7.99	.11***	7.05	.10***
education	-.03	-.00	.91	.06*	.72	.05
a	64.86		55.26		57.17	
R^2(adj)		.09		.08		.13
F	17.12		13.89		23.14	

*p<.05; **p<.01; ***p<.001

Table 35(a)
Regression of Perceived Economic Well-Being on Income Groups,
Adjusted for Controls, with Age Group and Perceived Deprivation as Covariates

	Age Group and Perceived Deprivation															
	35-49						50-64						65+			
	W		S		B		W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:																		
lo inc	.6	.01	-12.3	-.22	-11.5	-.16	-12.5	-.22	-23.4	-.33	-21.9	-.23	-.6	-.01	-9.7	-.15	6.8	.12
av inc	4.4	.07	-5.8	-.10	-4.9	-.08	-5.7	-.09	-4.3	-.06	-16.1	-.24	-.5	-.01	-1.1	-.02	4.3	.08
a	28.2		57.2		97.4		41.7		76.4		92.9		48.6		75.6		91.8	
R^2 (adj)		.06		.05		.05		.03		.07		.05		.00		.00		.00
1979:																		
lo inc	-.2	-.00	-12.6	-.20	-7.8	-.13	-35.5	-.56	-14.0	-.25	-1.5	-.02	-33.7	-.52	-21.3	-.34	-11.6	-.20
av inc	-5.0	-.08	-6.0	-.11	-6.4	-.13	-2.7	-.04	-6.8	-.12	-.8	-.01	-28.1	-.38	-15.9	-.24	-3.9	-.06
a	46.2		50.7		84.2		77.2		53.9		63.0		83.3		84.1		80.9	
R^2 (adj)		.00		.05		.02		.27		.09		.00		.12		.04		.01
1981:																		
lo inc	-21.2	-.46	-14.1	-.25	-17.2	-.25	-43.3	-.66	-22.4	-.35	-12.5	-.19	-33.6	-.52	-22.0	-.37	-17.4	-.25
av inc	-8.3	-.17	-9.9	-.19	-12.0	-.22	-27.1	-.45	-10.3	-.18	-7.5	-.12	-32.4	-.49	-13.1	-.21	-18.0	-.27
a	39.4		53.3		63.6		76.7		54.7		57.2		104.0		77.9		96.2	
R^2 (adj)		.12		.06		.13		.26		.14		.05		.09		.04		.04

W = worse; S = similar; B = better

Table 35(b)

Regression of Subjective Economic Well-Being on Income, Age Group, Controls, Perceptions of Relative Deprivation and Interactions

	1977		1979		1981	
	b	beta	b	beta	b	beta
low income	-10.68	-.15	-2.56	-.04	-24.32	-.37***
avg income	-7.01	-.09	-7.09	-.11	-11.24	-.18
age 65+	30.43	.35**	43.29	.58***	46.73	.65***
age 50-64	6.80	.10	23.69	.40**	25.00	.42**
age65+ * low inc	-12.15	-.10	-33.81	-.33**	-8.43	-.08
age50-64 * low inc	-5.16	-.04	-34.43	-.37***	-13.31	-.13
age65+ * avg inc	-14.91	-.11	-26.06	-.20*	-25.00	-.22*
age50-64 * avg inc	.67	.01	-3.17	-.03	-11.54	-.12
low relative dep.	41.06	.60***	27.07	.46***	24.00	.42***
avg relative dep.	22.45	.32***	17.53	.30**	11.43	.19
age65+ * low reldep	-22.44	-.17*	-32.52	-.29**	-37.40	-.36***
age65+ * avg reldep	-28.60	-.20*	-24.67	-.23*	-33.17	-.32***
age50-64 * lo reldep	-5.18	-.05	-23.49	-.29**	-25.87	-.35**
age50-64 * avg reldep	3.66	.04	-19.22	-.24*	-21.05	-.24*
age65+ * low inc * low reldep	27.76	.11*	29.65	.18*	17.99	.10
a	41.13		39.69		43.44	
R^2(adj)		.27		.15		.18
F	27.54		11.26		13.75	

*p<.05; **p<.01; ***p<.001

Table 36(a)
Regression of Perceived Economic Well-Being on Income Groups,
Adjusted for Controls, with Age Group and Perceived Justice as Covariates

	Age Group and Perceived Justice															
	35-49						50-64						65+			
	W		S		B		W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:																		
lo inc	-11.0	-.19	-12.4	-.22	-9.1	-.13	-20.4	-.33	-13.3	-.19	-20.1	-.22	-11.8	-.19	-14.0	-.21	-9.8	-.15
av inc	-5.3	-.08	-.6	-.01	-9.7	-.17	-2.5	-.04	-20.7	-.29	-9.2	-.14	-13.1	-.19	-3.2	-.04	-14.0	-.23
a	38.6		63.2		80.3		45.8		66.4		92.1		64.3		73.4		95.1	
R^2 (adj)		.02		.05		.06		.10		.07		.02		.05		.00		.01
1979:																		
lo inc	-11.4	-.19	-13.7	-.22	-8.1	-.14	-31.3	-.49	-11.9	-.22	-5.0	-.08	-52.7	-.76	-18.6	-.33	-17.8	-.28
av inc	-14.0	-.25	-2.6	-.05	-7.0	-.13	.9	.01	1.9	.03	-10.5	-.18	-35.4	-.48	-13.2	-.20	-13.3	-.19
a	37.6		52.8		78.1		49.9		53.0		69.9		107.1		82.6		79.9	
R^2 (adj)		.07		.05		.03		.27		.06		.04		.22		.05		.04
1981:																		
lo inc	-27.9	-.56	-15.5	-.29	-17.0	-.25	-29.8	-.47	-15.9	-.29	-12.1	-.18	-32.7	-.44	-25.2	-.45	-21.4	-.33
av inc	-22.4	-.43	-14.7	-.30	-6.4	-.12	-14.2	-.22	-16.0	-.31	-5.4	-.10	-22.9	-.34	-19.4	-.31	-18.0	-.28
a	53.1		49.0		59.4		51.4		50.6		67.1		62.4		92.6		97.4	
R^2 (adj)		.23		.12		.14		.12		.17		.02		.12		.07		.09

W = worse; S = similar; B = better

Table 36(b)

Regression of Subjective Economic Well-Being on Income, Age Group, Controls, Perceptions of Distributive Justice and Interactions

	1977		1979		1981	
	b	beta	b	beta	b	beta
low income	-13.77	-.19**	-11.46	-.18	-27.20	-.42***
avg income	-8.19	-.11	-13.09	-.21*	-18.41	-.30***
age 65+	7.57	.09	30.99	.42***	27.31	.38**
age 50-64	3.81	.05	10.99	.18	6.19	.10
age65+ * low inc	6.46	.05	-22.76	-.22*	2.67	.02
age50-64 * low inc	-7.81	-.07	-20.63	-.22*	.40	.00
age65+ * avg inc	-1.73	.01	-7.00	-.05	-6.38	-.06
age50-64 * avg inc	5.37	.05	8.25	.08	6.91	.07
hi justice	37.68	.55***	23.49	.41***	18.80	.33***
avg justice	16.65	.23***	9.45	.15*	9.28	.15*
a	45.15		44.51		56.56	
R^2(adj)		.28		.18		.20
F	23.50		13.66		17.59	

*p<.05; **p<.01; ***p<.001

Table 37(a)
Regression of Perceived Economic Well-Being on Income Groups,
Adjusted for Controls, with Age Group and Perceived Attainment (Aspiration) as Covariates

	Age Group and Perceived Attainment											
	35-49				50-64				65+			
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
lo inc	-12.4	-.23	-11.3	-.18	-11.6	-.17	-15.3	-.21	-24.5	-.33	-29.2	-.34	-1.2	-.02	-25.5	-.40	-13.4	-.18
av inc	-3.2	-.05	-.2	-.00	-18.0	-.32	-15.3	-.19	-6.3	-.09	-13.9	-.19	14.0	.19	-18.9	-.27	-13.4	-.19
a	38.4		60.6		100.8		38.1		70.3		82.4		42.2		108.6		84.1	
R^2 (adj)		.02		.04		.10		.05		.08		.09		.00		.11		.01
1979:												
lo inc	-9.0	-.14	-7.9	-.14	-17.4	-.25	-29.3	-.46	-15.8	-.28	-1.1	-.02	-32.0	-.49	-25.1	-.42	-16.8	-.27
av inc	-11.5	-.19	-5.9	-.12	-9.3	-.15	1.8	.03	-10.3	-.17	-1.2	-.02	-35.4	-.44	-18.3	-.26	-10.3	-.15
a	33.5		54.2		96.7		44.9		59.2		60.8		96.6		95.3		71.9	
R^2 (adj)		.06		.04		.11		.23		.13		.01		.12		.08		.08
1981:												
lo inc	-29.2	-.54	-17.9	-.31	-5.0	-.07	-27.0	-.46	-17.5	-.28	-15.9	-.23	-26.0	-.34	-23.3	-.41	-23.3	-.35
av inc	-17.5	-.32	-12.1	-.24	.7	.01	-15.6	-.23	-14.4	-.27	-4.8	-.08	-4.6	-.07	-14.1	-.23	-27.7	-.41
a	47.8		60.3		42.6		52.6		47.4		66.4		72.2		82.2		96.1	
R^2 (adj)		.24		.14		.11		.12		.17		.06		.01		.05		.12

W = worse; S = similar; B = better

Table 37(b)

Regression of Subjective Economic Well-Being on Income, Age Group, Controls, Perceptions of Attainment (Aspirations) and Interactions

	1977		1979		1981	
	b	beta	b	beta	b	beta
low income	-14.72	-.20**	-10.32	-.16*	-29.51	-.45***
avg income	-4.02	-.05	-10.72	-.17*	-16.80	-.28***
age 65+	1.09	.01	20.26	.27*	17.45	.24*
age 50-64	14.10	.20*	7.06	.12	8.78	.15
age65+ * low inc	15.40	.12	-10.58	-.10	10.86	.10
age50-64 * low inc	-5.91	-.05	-18.89	-.20*	2.80	.03
age65+ * avg inc	16.63	.12	-19.02	-.14	13.38	.12
age50-64 * avg inc	-13.70	-.12	7.49	.07	2.10	.02
hi attainment	44.79	.64***	27.55	.44***	23.70	.37***
avg attainment	23.65	.34***	14.08	.24***	13.64	.24***
age50-64 * hi attain	-20.55	-.22**	-14.79	-.17*	-10.00	-.11
a	41.99		43.64		56.54	
R^2(adj)		.22		.16		.21
F	17.60		11.70		25.58	

*p<.05; **p<.01; ***p<.001

Table 38(a)
Regression of Perceived Economic Well-Being on Income Groups,
Adjusted for Controls, with Age Group and Perceived Attainment (Expectations) as Covariates

	Age Group and Perceived Attainment															
	35-49						50-64						65+			
	W		S		B		W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:																		
lo inc	-23.7	-.36	-15.3	-.24	-22.5	-.33	-34.2	-.44	-30.7	-.36	-23.9	-.30	-2.1	-.02	-29.7	-.47	-14.1	-.20
av inc	-7.5	-.11	-7.4	-.13	-14.4	-.18	-24.7	-.29	-4.5	-.07	-12.1	-.16	-2.6	-.03	2.2	.03	-11.5	-.16
a	48.3		67.8		83.2		61.3		69.5		76.0		117.4		61.6		81.0	
R^2 (adj)		.10		.06		.10		.17		.14		.07		.22		.12		.01
1979:																		
lo inc	-7.0	-.11	-11.1	-.17	-14.2	-.22	-42.2	-.61	-12.8	-.23	-8.2	-.13	-45.6	-.84	-45.6	-.48	-21.2	-.34
av inc	-8.4	-.14	-3.7	-.08	-11.1	-.19	-9.2	-.14	-12.7	-.23	-2.9	-.04	-37.4	-.64	-50.6	-.37	-12.3	-.17
a	52.7		49.6		65.4		62.3		42.9		59.4		107.5		141.2		77.6	
R^2 (adj)		.01		.04		.08		.37		.18		.06		.21		.03		.09

W = worse; S = similar; B = better

Table 38(b)

Regression of Subjective Economic Well-Being on Income, Age Group, Controls, Perceptions of Attainment (Expectations) and Interactions

	1977		1979	
	b	beta	b	beta
low income	23.80	-.33***	-6.12	-.10
avg income	-8.00	-.11*	-7.22	-.12
age 65+	7.67	.09	28.28	.38*
age 50-64	3.08	.04	12.75	.21*
age65+ * low inc	.12	.00	-20.49	-.20
age50-64 * low inc	-9.42	-.08	-30.19	-.32***
age65+ * avg inc	1.10	.01	-15.80	.12
age50-64 * avg inc	-6.27	-.05	.01	.00
hi attainment	.72	.01	15.81	.27***
avg attainment	16.82	.24***	6.75	.09
age50-64 * low inc * hi attainment			33.73	.29***
a	62.17		46.92	
R^2(adj)		.12		.10
F	8.94		7.61	

*p<.05; **p<.01; ***p<.001

Table 39(a)
Regression of Perceived Economic Well-Being on Income Groups,
Adjusted for Controls, with Age Group and Perceived Efficacy as Covariates

	Age Group and Perceived Efficacy											
	35-49						50-64					
	1		2		3		1		2		3	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
lo inc	-21.1	-.33	-23.3	-.35	-13.1	-.18	-39.2	-.53	-17.4	-.21	-14.8	-.17
av inc	-10.8	-.14	-14.5	-.22	-6.6	-.10	-24.3	-.30	-10.3	-.15	.3	.00
a	50.3		63.9		70.9		65.4		79.2		74.8	
R^2 (adj)		.10		.15		.02		.23		.05		.03
1979:												
lo inc	-25.8	-.37	-14.6	-.21	-4.0	-.07	-35.5	-.58	-1.4	-.02	-7.9	-.13
av inc	-4.4	-.08	-14.6	-.23	-3.3	-.06	-1.7	-.03	-4.7	-.08	-6.3	-.10
a	46.0		68.6		64.0		82.3		68.7		58.6	
R^2 (adj)		.16		.05		.00		.28		.03		.05
1981:												
lo inc	-22.6	-.40	-17.5	-.28	-18.8	-.26	-25.6	-.41	-8.0	-.11	-18.9	-.30
av inc	-13.4	-.24	-13.0	-.25	-11.7	-.21	-14.2	-.24	-10.0	-.17	-8.0	-.13
a	52.7		60.9		61.9		50.0		70.0		54.1	
R^2 (adj)		.12		.09		.11		.16		.02		.10

	65+					
	1		2		3	
	b	beta	b	beta	b	beta
1977:						
lo inc	-8.6	-.12	-19.2	-.27	-21.4	-.30
av inc	8.5	.11	-24.8	-.34	-15.3	-.21
a	59.3		102.7		94.4	
R^2 (adj)		.00		.10		.03
1979:						
lo inc	-30.1	-.44	-7.7	-.13	-23.6	-.40
av inc	-13.4	-.17	-13.0	-.19	-16.4	-.26
a	102.4		83.7		90.0	
R^2 (adj)		.09		.00		.06
1981:						
lo inc	-26.2	-.41	-21.9	-.32	-13.9	-.22
av inc	-23.7	-.35	-17.6	-.26	-13.6	-.23
a	85.4		83.3		96.6	
R^2 (adj)		.11		.03		.02

1 = low; 2 = average; 3 = high

Table 39(b)

Regression of Subjective Economic Well-Being on Income, Age Group, Controls, Perceptions of Personal Efficacy and Interactions

	1977		1979		1981	
	b	beta	b	beta	b	beta
low income	-24.27	-.33***	-10.16	-.16*	-22.89	-.35***
avg income	-12.38	-.17*	-4.46	-.07	-11.69	-.19**
age 65+	-.93	-.01	27.13	.37***	14.10	.20*
age 50-64	12.81	.18*	10.33	.17*	4.33	.07
age65+ * low inc	15.10	.12	-16.83	-.16	2.15	.02
age50-64 * low inc	-15.43	-.13*	-12.02	-.13	-1.37	-.01
age65+ * avg inc	19.57	.14*	-11.42	-.09	-6.08	-.05
age50-64 * avg inc	-13.18	-.11	-3.71	-.04	-.96	-.01
hi efficacy	12.01	.17**	15.14	.25***	11.31	.18**
avg efficacy	7.99	.10	8.68	.14*	2.71	.04
a	59.76		49.35		63.82	
R^2(adj)		.14		.11		.14
F	10.50		8.14		11.57	

*p<.05; **p<.01; ***p<.001

Table 41(a)

Regression of Perceived Health on Objective Health Status
by Age Group - 1977, 1979, 1981

Sample	Age Group 35 - 49		50 - 64		65+	
Predictors	b	beta	b	beta	b	beta
1977:						
sick1	-.30	-.08***	-.25	-.05	-.60	-.09*
sick2	-.82	-.22***	-.75	-.21***	-.78	-.22***
sick3	-1.31	-.32***	-1.00	-.27***	-1.03	-.34***
lt1	-.52	-.20***	-.83	-.37***	-.63	-.28***
lt2	-.92	-.11***	-1.06	-.24***	-.85	-.24***
a	3.88		3.66		3.64	
R^2(adj)		.23		.33		.32
1979:						
acute1	-.16	-.08	-.17	-.09	-.05	-.02
acute2	-.59	-.24***	-.50	-.18***	-.79	-.30***
acute3	-.80	-.20***	-.80	-.26***	-.87	-.24***
acute4	-.73	-.13***	-1.06	-.26***	-.93	-.24***
hh1	-.43	-.12***	-.38	-.12***	-.43	-.13**
hh2	-.76	-.20***	-.51	-.14***	-.13	-.04
hh3	-1.29	-.29***	-1.10	-.38***	-.84	-.33***
a	4.11		3.77		3.32	
R^2(adj)		.24		.34		.31
1981:						
acute1	-.22	-.11*	-.38	-.18***	-.50	-.26**
acute2	-.39	-.17***	-.69	-.25***	-.87	-.35***
acute3	-.80	-.24***	-.80	-.22***	-1.42	-.49***
acute4	-1.01	-.20***	-1.11	-.24***	-1.46	-.49***
hh1	-.31	-.10**	-.79	-.25***	-.08	-.03
hh2	-.68	-.19***	-.90	-.25***	-.12	-.04
hh3	-1.53	-.36***	-1.33	-.39***	-.66	-.24***
a	4.17		4.07		3.85	
R^2(adj)		.27		.36		.34

***p<.001; **p<.01; *p<.05

Table 41(b)

Regression of Perceived Health on Health Status, Age Group, and Interactions

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	-.30	-.07**	-.19	-.09*	-.20	-.10*
sick2	-.82	-.22***	-.61	-.22***	-.42	-.16***
sick3	-1.31	-.35***	-.87	-.24***	-.82	-.23***
sick4	...	...	-.75	-.16***	-1.02	-.23***
lt1	-.52	-.22***	-.44	-.13***	-.32	-.10**
lt2	-.92	-.19***	-.77	-.20***	-.67	-.19***
lt3	...	...	-1.27	-.37***	-1.51	-.42***
age 65+	-.24	-.09**	-.79	-.30***	-.38	-.15*
age 50-64	-.22	-.10***	-.32	-.14**	-.08	-.04
age65+ * mod hi chronic	.05	.01	.64	.09***	.43	.07*
age65+ * hi chronic	.07	.01	.49	.09*	.76	.13***
age50-64 * lo chronic	-.31	-.09**	.10	.02	-.29	-.07
a	3.88		4.13		4.18	
R^2(adj.)		.32		.37		.38
F	54.10		44.69		48.09	

*p<.05; **p<.01; ***p<001
Note: Only significant interactions are reported.

Table 42(a)

Regression of Perceived Health on Health Status and Controls by Age Group - 1977, 1979, 1981

Sample	35 - 49		50 - 64		65+	
Predictors	b	beta	b	beta	b	beta
1977:						
sick1	-.33	-.09*	-.28	-.06	-.57	-.08
sick2	-.75	-.21***	-.79	-.22***	-.75	-.22***
sick3	-1.21	-.30***	-.98	-.27***	-1.00	-.33**
lt1	-.54	-.21***	-.79	-.36***	-.64	-.28***
lt2	-.89	-.11***	-1.07	-.24***	-.82	-.23***
female	-.10	-.05	.03	.02	-.03	-.02
married	.36	.12***	-.04	-.01	-.11	-.05
education	.13	.17***	.11	.13***	.08	.10*
a	3.27		3.40		3.55	
R^2(adj)		.28		.34		.33
1979:						
acute1	-.15	-.08	-.16	-.08	.00	.00
acute2	-.56	-.22***	-.45	-.16***	-.67	-.26***
acute3	-.76	-.19***	-.77	-.25***	-.71	-.20**
acute4	-.68	-.12***	-1.06	-.26***	-.74	-.19**
hh1	-.44	-.12***	-.38	-.12***	-.44	-.13*
hh2	-.76	-.20***	-.51	-.14***	-.19	-.06
hh3	-1.25	-.28***	-1.07	-.37***	-.90	-.35***
female	-.05	-.03	.10	.05	.06	.03
married	.01	.00	-.15	-.06	.06	.03
education	.07	.15***	.09	.16***	.08	.14**
a	3.74		3.42		2.90	
R^2(adj)		.27		.37		.32
1981:						
acute1	-.23	-.12**	-.38	-.19***	-.52	-.26***
acute2	-.38	-.16***	-.66	-.24***	-.86	-.34***
acute3	-.75	-.22***	-.76	-.21***	-1.43	-.49***
acute4	-.90	-.18***	-1.06	-.23***	-1.44	-.49***
hh1	-.34	-.11***	-.78	-.25***	-.09	-.03
hh2	-.63	-.18***	-.91	-.25***	-.12	-.04
hh3	-1.51	-.36***	-1.33	-.39***	-.66	-.24***
female	-.11	-.06	.08	.04	.12	.06
married	.09	.03	-.00	-.00	-.08	-.04
education	.09	.18***	.06	.10**	.02	.04
a	3.67		3.76		3.76	
R^2(adj)		.30		.37		.34

***p<.001; **p<.01; *p<.05

Table 42(b)

Regression of Perceived Health on Health Status, Age Group, Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	-.33	-.07**	-.18	-.08*	-.23	-.11*
sick2	-.78	-.21***	-.58	-.21***	-.43	-.16***
sick3	-1.25	-.34***	-.82	-.22***	-.80	-.23***
sick4	...	...	-.69	-.15***	-.97	-.22***
lt1	-.52	-.22***	-.47	-.13***	-.33	-.10**
lt2	-.89	-.18***	-.75	-.20***	-.63	-.18***
lt3	...	...	-1.24	-.36***	-1.49	-.42***
age 65+	-.18	-.07*	-.76	-.28***	-.32	-.12*
age 50-64	-.20	-.09***	-.30	-.14**	-.08	-.04
age65+ * mod hi chronic	.	.	.56	.08**	.40	.06*
age65+ * hi chronic	.	.	.41	.07*	.71	.12***
age50-64 * lo chronic	-.27	-.08*	.	.	-.45	-.09**
female	-.02	-.01	.01	.01	-.01	-.00
married	.08	.03	-.04	-.01	-.00	-.00
education	.11	.14***	.08	.15***	.07	.12***
a	3.52		3.74		3.86	
R^2(adj.)		.34		.39		.40
F	50.29		42.93		44.92	

*p<.05; **p<.01; ***p<001
Note: Only significant interactions are reported.

Table 43(a)
Regression of Perceived Health on Health Status, Adjusted for Controls,
with Age Group and Perceived Deprivation as Covariates

	Age Group and Perceived Deprivation											
	35-49						50-64					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
sick 1	-.5	-.13	-.3	-.08	-.3	-.07	-.6	-.14	.6	.12	-.5	-.11
sick 2	-1.1	-.28	-.4	-.12	-.8	-.24	-.8	-.33	-.7	-.20	-.7	-.22
sick 3	-2.0	-.44	-1.2	-.32	-1.0	-.26	-1.0	-.38	-.7	-.21	-.8	-.16
lt 1	-.5	-.16	-.4	-.18	-.7	-.27	-.9	-.40	-.9	-.42	-.6	-.30
lt 2	-.0	-.00	-1.4	-.10	-1.4	-.16	-1.2	-.33	-.8	-.20	-1.1	-.24
a	3.2		3.2		3.5		3.5		3.1		3.5	
R^2 (adj)		.31		.21		.30		.49		.37		.22
1979:												
acute 1	-.0	-.01	-.2	-.12	-.1	-.04	.4	.17	-.0	-.02	-.3	-.19
acute 2	-.8	-.32	-.5	-.24	-.4	-.15	.6	.20	-.4	-.16	-.6	-.26
acute 3	-1.2	-.32	-.5	-.13	-.9	-.19	-.0	-.00	-.7	-.24	-.8	-.25
acute 4	-.5	-.15	-1.3	-.16	-.8	-.13	-.3	-.12	-.9	-.21	-1.0	-.12
lt 1	.5	.11	-.5	-.14	-.6	-.16	-.8	-.21	-.3	-.10	-.4	-.18
lt 2	-.4	-.10	-.6	-.17	-1.2	-.27	-.6	-.21	-.5	-.13	-.6	-.18
lt 3	-1.0	-.30	-1.5	-.27	-1.0	-.24	-1.4	-.67	-.8	-.28	-1.2	-.29
a	3.7		3.8		3.8		2.4		3.4		3.6	
R^2 (adj)		.39		.21		.26		.54		.24		.26

	Age Group and Perceived Deprivation					
	65+					
	W		S		B	
	b	beta	b	beta	b	beta
1977:						
sick 1	-1.3	-.20	.1	.02	-.7	-.09
sick 2	-.9	-.21	-.8	-.28	-.6	-.19
sick 3	-1.3	-.57	-.6	-.18	-.9	-.25
lt 1	-.9	-.40	-.5	-.25	-.6	-.26
lt 2	-.9	-.30	-.6	-.17	-.8	-.19
a	3.5		3.1		3.9	
R^2 (adj)		.59		.23		.26
1979:						
acute 1	.4	.19	.1	.06	-.1	-.08
acute 2	-.1	-.06	-.6	-.26	-.4	-.14
acute 3	-.4	-.12	-.4	-.13	-1.1	-.30
acute 4	.2	.07	-1.0	-.14	-1.3	-.37
lt 1	.0	.00	-.5	-.18	-.4	-.13
lt 2	-.6	-.23	-.4	-.14	.2	.07
lt 3	-1.2	-.62	-1.1	-.38	-.4	-.15
a	2.5		2.5		3.4	
R^2 (adj)		.37		.29		.24

(continued)

Table 43(a) - continued

	Age Group and Perceived Deprivation											
	35-49			50-64			65+					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1981:												
acute 1	-.2	-.12	.0	.02	-.4	-.22	-.2	-.08	-.1	-.08	-.5	-.25	-.4	-.19	-.8	-.39	-.4	-.19
acute 2	-.5	-.20	-.1	-.05	-.5	-.23	-.6	-.18	-.4	-.19	-.7	-.24	-.8	-.25	-1.0	-.41	-.8	-.35
acute 3	-.4	-.11	-.4	-.14	-1.1	-.33	-.6	-.20	-.0	-.01	-1.1	-.35	-1.4	-.54	-1.5	-.53	-1.4	-.42
acute 4	-.9	-.22	-.7	-.16	-1.0	-.15	-1.1	-.36	-.6	-.14	-.8	-.11	-2.0	-.69	-1.5	-.53	-1.0	-.33
lt 1	-.3	-.06	-.4	-.13	-.3	-.11	.1	.04	-.9	-.32	-.9	-.30	-.1	-.04	-.2	-.06	-.2	-.10
lt 2	-.6	-.18	-.4	-.12	-.7	-.22	-1.8	-.44	-.6	-.21	-1.1	-.33	.0	.01	-.1	-.04	-.4	-.12
lt 3	-1.8	-.64	-1.4	-.32	-1.1	-.20	-1.4	-.51	-1.3	-.44	-1.2	-.29	-.3	-.12	-.7	-.28	-.6	-.19
a	3.3		3.6		3.9		4.2		3.4		4.1		2.7		3.9		3.9	
R^2 (adj)		.53		.23		.26		.46		.34		.34		.44		.36		.27

W = worse; S = similar; B = better

Table 43(b)

Regression of Perceived Health on Health Status,
Age Group, Perceived Deprivation, Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	-.55	-.12*	-.25	-.12	-.26	-.12
sick2	-1.13	-.31***	-.84	-.30**	-.63	-.24*
sick3	-2.10	-.57***	-1.45	-.40***	-.69	-.19
sick4	...	...	-.61	-.13	-1.11	-.25**
lt1	-.51	-.21*	-.11	-.03	-.39	-.12
lt2	.02	.00	-.44	-.12	-.82	-.24**
lt3	...	...	-1.04	-.30***	-1.74	-.49***
age 65+	-.20	-.07	-1.02	-.38**	-.87	-.33*
age 50-64	-.21	-.10	-.40	-.18	.22	.10
lo reldep	.23	.11*	.09	.04	.26	.12
avg reldep	-.09	-.04	.02	.01	-.19	-.09
age50-64 * sick3	1.01	.17**	.	.	.	.
age65+ * lt3	.	.	.	.	1.24	.21***
lo reldep * sick3	1.08	.18**	.	.	.	.
lo reldep * lt2	-1.43	-.18**	.	.	.	.
a	3.47		3.74		3.85	
R^2(adj.)		.37		.40		.42
F	20.61		16.28		17.68	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions (p<.01) are reported.

Table 44(a)
Regression of Perceived Health on Health Status, Adjusted for Controls, with Age Group and Perceived Justice as Covariates

	Age Group and Perceived Justice											
	35-49			50-64			65+					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
sick 1	-.1	-.04	-.0	-.01	-.5	-.16	-.3	-.09	-.3	.08	.1	.02	-1.0	-.17	.3	.05	-.5	-.07
sick 2	-.7	-.19	-.5	-.15	-.9	-.25	-.8	-.23	-.6	-.20	-.7	-.22	-.7	-.19	-.6	-.25	-.7	-.20
sick 3	-1.3	-.38	-1.1	-.24	-1.1	-.24	-.8	-.34	-.6	-.15	-1.0	-.22	-1.4	-.55	-.8	-.28	-.7	-.23
lt 1	-.5	-.18	-.5	-.17	-.6	-.24	-1.0	-.50	-.7	-.33	-.7	-.32	-.8	-.34	-.6	-.30	-.6	-.27
lt 2	-.4	-.05	-.9	-.15	-1.7	-.15	-1.1	-.32	-1.4	-.36	-.9	-.18	-.6	-.19	-.2	-.05	-1.0	-.30
a	3.0		3.1		3.6		3.1		3.0		3.5		3.0		3.3		3.7	
R^2 (adj)		.26		.20		.30		.46		.32		.26		.47		.25		.26
1979:												
acute 1	-.1	-.04	-.5	-.26	-.0	-.00	.2	.09	-.8	-.44	.1	.05	.3	.16	.5	.24	-.3	-.16
acute 2	-.7	-.23	-.8	-.34	-.6	-.22	-.1	-.03	-1.2	-.45	-.1	-.03	.2	.12	-.6	-.21	-.9	-.36
acute 3	-1.3	-.36	-.9	-.18	-.5	-.15	-.2	-.07	-1.8	-.68	-.3	-.10	-.1	-.02	-.5	-.11	-1.0	-.31
acute 4	-.5	-.15	-.9	-.15	-1.1	-.09	-.6	-.23	-2.1	-.51	-.3	-.05	.2	.09	-.6	-.17	-1.4	-.29
lt 1	-.4	-.11	-.6	-.19	-.3	-.08	-.8	-.18	-.4	-.11	-.4	-.18	-.4	-.13	-.3	-.11	-.5	-.16
lt 2	-.6	-.12	-.8	-.22	-.9	-.24	-.3	-.07	-.3	-.09	-.7	-.22	-.5	-.19	-.7	-.20	-.0	-.01
lt 3	-1.6	-.45	-1.6	-.32	-.7	-.15	-1.3	-.54	-.4	-.17	-1.2	-.32	-1.0	-.46	-.8	-.30	-.8	-.30
a	3.8		3.7		3.9		2.6		4.2		3.2		2.0		2.9		3.2	
R^2 (adj)		.46		.32		.19		.51		.49		.21		.03		.30		.31

(continued)

Table 44(a) - continued

	Age Group and Perceived Justice											
	35-49			50-64			65+					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1981:												
acute 1	-.3	-.13	-.1	-.07	-.2	-.14	-.4	-.15	-.3	-.16	-.4	-.22	-.5	-.20	.2	.10	-.6	-.34
acute 2	-.7	-.27	-.3	-.13	-.4	-.20	-.7	-.24	-.5	-.21	-.8	-.28	-.3	-.10	-.5	-.23	-.9	-.37
acute 3	-1.0	-.26	-.9	-.27	-.4	-.12	-.5	-.15	-.9	-.26	-.9	-.23	-1.3	-.47	-.7	-.32	-1.5	-.44
acute 4	-.9	-.20	-1.4	-.25	-.4	-.09	-.7	-.21	-1.0	-.24	-1.2	-.13	-1.8	-.62	-1.0	-.38	-1.1	-.34
lt 1	-.7	-.16	-.2	-.08	-.5	-.15	-.5	-.15	-.6	-.20	-1.0	-.32	.0	.01	-.3	-.11	-.2	-.06
lt 2	-.5	-.14	-.5	-.15	-1.0	-.25	-1.1	-.28	-.8	-.26	-.9	-.29	-.0	-.00	-.3	-.12	-.3	-.12
lt 3	-1.7	.51	-1.3	-.29	-1.3	-.27	-1.5	-.54	-.9	-.26	-1.5	-.42	-.6	-.25	-.9	-.33	-.6	-.23
a	3.7		3.6		3.7		3.2		3.6		4.0		3.5		3.3		3.8	
R^2 (adj)		.44		.28		.22		.45		.26		.38		.42		.36		.26

W = worse; S = similar; B = better

Table 44(b)

Regression of Perceived Health on Health Status, Age Group, Perceived Justice, Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	-.15	-.03	.12	.06	-.37	-.18
sick2	-.70	-.19**	-.32	-.11	-.71	-.27**
sick3	-1.35	-.36***	-1.12	-.31***	-1.11	-.32***
sick4	...	...	-.33	-.07	-1.07	-.24**
lt1	-.52	-.22**	-.58	-.17*	-.58	-.18*
lt2	-.30	-.06	-.59	-.16	-.58	-.17**
lt3	...	...	-1.51	-.44***	-1.65	-.46***
age 65+	-.16	-.06	-1.27	-.48***	-.69	-.26*
age 50-64	.01	.00	-.41	-.19	-.55	-.25
hi justice	.31	.15**	.00	.00	-.09	-.04
avg justice	.09	.04	.33	.15	-.21	-.09
age 65+ * lt3	.	.	.	.	1.00	.17**
avg justice * sick1	.	.	-.65	-.23**	.	.
age50-64 * sick3 * avg justice	.	.	-1.55	-.19**	.	.
a	3.32		3.64		3.99	
R^2(adj.)		.36		.41		.41
F	19.72		17.15		17.05	

*p<.05; *p<.01; ***p<.001
Note: Only significant interactions (p<.01) are reported.

Table 45(a)
Regression of Perceived Health on Health Status, Adjusted for Controls,
with Age Group and Perceived Attainment (Aspirations) as Covariates

	Age Group and Perceived Attainment											
	35-49				50-64				65+			
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
sick 1	-.4	-.11	-.3	-.09	-.0	-.00	-.4	-.10	-.0	.00	-.4	-.05	-1.0	-.19	-.1	-.02	-.8	-.10
sick 2	-1.0	-.28	-.4	-.10	-1.0	-.28	-.8	-.21	-.8	-.27	-.7	-.19	-1.1	-.30	-.6	-.21	-.9	-.23
sick 3	-1.2	-.35	-1.1	-.29	-1.4	-.20	-1.0	-.36	-.5	-.11	-1.2	-.27	-1.2	-.51	-1.2	-.37	-.8	-.26
lt 1	-.5	-.19	-.3	-.13	-1.1	-.38	-.9	-.39	-.6	-.27	-.9	-.38	-.4	-.21	-.5	-.26	-.7	-.29
lt 2	-.7	-.09	-.8	-.10	-1.7	-.20	-1.2	-.28	-.9	-.24	-1.3	-.25	-.2	-.07	-.9	-.25	-.9	-.27
a	3.4		3.1		3.8		3.2		3.0		3.9		3.0		3.5		3.9	
R^2 (adj)		.29		.22		.38		.39		.29		.33		.39		.31		.32
1979:												
acute 1	-.1	-.03	-.2	-.11	-.3	-.14	-.3	-.13	-.2	-.11	-.0	-.01	.1	.09	.3	.15	-.2	-.12
acute 2	-.7	-.27	-.4	-.15	-1.2	-.45	-.8	-.26	-.4	-.15	-.3	-.12	-.5	-.27	-.7	-.30	-.5	-.15
acute 3	-1.0	-.23	-.5	-.13	-1.4	-.37	-1.1	-.42	-1.0	-.35	-.4	-.10	.2	.05	-1.0	-.22	-.8	-.26
acute 4	-.5	-.12	-.6	-.11	-	-	-1.4	-.46	-1.6	-.29	-.6	-.13	-1.0	-.38	-.4	-.11	-1.0	-.25
lt 1	-.5	-.12	-.4	-.12	-.7	-.17	-.4	-.10	-.5	-.17	-.3	-.10	-.0	-.01	-.7	-.24	-.3	-.09
lt 2	-.7	-.18	-.8	-.21	-1.5	-.32	-.1	-.02	-.5	-.15	-.8	-.21	-.3	-.15	.0	.01	-.4	-.13
lt 3	-1.3	-.31	-1.4	-.30	-.4	-.10	-1.2	-.48	-.6	-.17	-1.2	-.40	-.7	-.39	-.9	-.33	-.8	-.33
a	3.4		3.6		4.6		3.2		3.4		3.4		3.1		3.3		2.8	
R^2 (adj)		.35		.23		.35		.59		.32		.25		.18		.34		.34

(continued)

Table 45(a) - continued

	Age Group and Perceived Attainment											
	35-49						50-64					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1981:												
acute 1	-.3	-.13	-.2	-.12	-.2	-.11	-.9	-.41	-.2	-.12	-.5	-.24
acute 2	-.4	-.17	-.4	-.16	-.6	-.22	-1.5	-.47	-.5	-.19	-.7	-.24
acute 3	-.5	-.16	-.9	-.27	-.7	-.16	-.9	-.32	-.7	-.19	-1.1	-.28
acute 4	-.8	-.18	-.9	-.21	.9	.07	-1.3	-.39	-.8	-.16	-1.3	-.26
lt 1	-.6	-.16	-.1	-.03	-1.1	-.32	-.5	-.16	-.6	-.20	-1.0	-.33
lt 2	-.4	-.12	-.6	-.17	-1.1	-.30	-1.4	-.42	-.8	-.26	-1.0	-.27
lt 3	-1.7	-.53	-1.1	-.24	-1.5	-.14	-1.4	-.55	-1.0	-.26	-1.6	-.49
a	3.7		3.6		3.9		4.0		3.6		4.0	
R^2 (adj)		.42		.26		.25		.46		.25		.47

	Age Group and Perceived Attainment					
	65+					
	W		S		B	
	b	beta	b	beta	b	beta
1981:						
acute 1	-1.0	-.44	-.2	-.13	-.5	-.23
acute 2	-.7	-.25	-.8	-.35	-.7	-.26
acute 3	-1.4	-.61	-1.0	-.40	-1.5	-.47
acute 4	-2.2	-.89	-1.4	-.47	-1.0	-.31
lt 1	-.0	-.00	-.2	-.09	-.2	-.10
lt 2	.3	.12	.1	.04	-.7	-.22
lt 3	-.1	-.06	-.6	-.17	-1.0	-.35
a	3.8		3.4		3.9	
R^2 (adj)		.34		.28		.37

W = worse; S = similar; B = better

Table 45(b)

Regression of Perceived Health on Health Status, Age Group, Perceived Attainment (Aspirations), Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	-.44	-.10*	-.01	-.00	-.35	-.17
sick2	-1.07	-.29***	-.58	-.21**	-.47	-.18*
sick3	-1.30	-.35***	-1.06	-.29***	-.64	-.18*
sick4	...	...	-.52	-.11	-.98	-.22**
lt1	-.43	-.18**	-.59	-.17**	-.67	-.21**
lt2	-.76	-.15	-.74	-.16	-.44	-.13
lt3	...	...	-1.34	-.44***	-1.74	-.49***
age 65+	-.39	-.15*	-1.04	-.48***	-.42	-.16
age 50-64	-.12	-.06	.05	-.19	.16	.07
hi attain	.47	.21***	.31	.00	.17	.07
avg attain	.17	.08*	.07	.15	.07	.03
hi attain * lt1	-.62	-.16**	.	.	.	.
avg attain * sick2	.70.	.13**	.	.	.	.
age 65+ * lt3	.	.	.	.	1.42	.24***
a	3.35		3.65		3.78	
R^2(adj.)		.37		.40		.42
F	20.48		16.74		17.76	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions (p<.01) are reported.

Table 46(a)
Regression of Perceived Health on Health Status, Adjusted for Controls, with Age Group and Perceived Attainment (Expectations) as Covariates

	Age Group and Perceived Attainment											
	35-49						50-64					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
sick 1	-.0	-.01	-.5	-.16	-.0	-.00	.5	.11	-.5	-.11	-.4	-.07
sick 2	-.7	-.14	-.5	-.17	-.9	-.25	-1.1	-.22	-1.0	-.33	-.7	-.18
sick 3	-1.4	-.43	-1.1	-.27	-1.3	-.27	-.8	-.32	-1.1	-.28	-.9	-.23
lt 1	-.5	-.19	-.2	-.07	-.9	-.35	-.8	-.40	-.6	-.27	-.8	-.38
lt 2	-.4	-.06	-.6	-.07	-1.3	-.15	-1.4	-.28	-1.1	-.28	-1.0	-.22
a	3.4		3.2		3.3		3.3		3.4		3.4	
R^2 (adj)		.30		.18		.41		.41		.35		.32
1979:												
acute 1	-.3	-.15	-.2	-.10	-.1	-.06	-.2	-.11	-.3	-.14	-.1	-.07
acute 2	-.9	-.34	-.1	-.04	-.6	-.26	-.2	-.06	-1.2	-.43	-.4	-.14
acute 3	-1.3	-.29	.0	.00	-.8	-.22	-.6	-.24	-1.6	-.39	-.8	-.26
acute 4	-.8	-.17	-.1	-.02	-1.2	-.19	-1.5	-.51	-2.1	-.50	-.7	-.15
lt 1	-.3	-.09	-.7	-.16	-.4	-.13	-.6	-.18	-.5	-.14	-.3	-.13
lt 2	-.7	-.17	-1.2	-.36	-.6	-.15	.0	.02	-.8	-.19	-.6	-.18
lt 3	-1.5	-.31	-1.6	-.37	-.8	-.18	-.8	-.33	.0	.01	-1.2	-.40
a	3.7		3.7		3.8		3.1		4.3		3.4	
R^2 (adj)		.40		.24		.23		.36		.37		.36

	65+					
	W		S		B	
	b	beta	b	beta	b	beta
sick 1			-.1	-.01	-.6	-.10
sick 2	-1.2	-.39	-.2	-.09	-.8	-.23
sick 3	-2.1	-.83	-.9	-.32	-.9	-.27
lt 1	-.7	-.31	-.9	-.45	-.6	-.27
lt 2	-.5	-.10	-.0	-.01	-.9	-.24
a	2.7		2.4		3.7	
R^2 (adj)		.46		.14		.30
acute 1	.2	.09	.1	.04	-.0	-.01
acute 2	.2	.11	-.3	-.17	-.8	-.30
acute 3	-.9	-.30	.7	.19	-.8	-.23
acute 4	-1.6	-.35	-.8	-.30	-.8	-.20
lt 1	.8	.19	-.6	-.29	-.4	-.14
lt 2	-2.7	-.56	-.2	-.13	-.2	-.07
lt 3	-.9	-.32	-1.0	-.24	-.8	-.32
a	3.9		2.7		3.0	
R^2 (adj)		.13		-.06		.32

W = worse; S = similar; B = better

Table 46(b)

Regression of Perceived Health on Health Status, Age Group, Perceived Attainment (Expectations), Interactions and Controls

	1977		1979	
	b	beta	b	beta
sick1	-.19	-.04	-.33	-.16*
sick2	-.78	-.21*	-.91	-.33***
sick3	-1.28	-.34***	-1.51	-.41***
sick4	...	...	-.84	-.18**
lt1	-.53	-.22**	-.31	-.09
lt2	-.65	-.13	-.71	-.19**
lt3	...	...	-1.48	-.43***
age 65+	-.29	-.11	-1.25	-.47***
age 50-64	-.49	-.22**	-.63	-.29**
hi attain	.11	.05	-.33	-.15
avg attain	-.12	-.05	-.21	-.08
avg attain * lt2	.	.	.80	.13*
age50-64 * lt2 * avg attain	.	.	-1.71	-.14**
age50-64 * lt3 * avg attain	.	.	-2.39	-.13**
avg attain * lt3	.	.	1.54	.14***
age50-64 * hh3 * hi attain	.	.	-1.23	-.19**
a	3.48		3.96	
R^2(adj.)		.35		.41
F	19.34		16.62	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions (p<.01) are reported.

Table 47(a)
Regression of Perceived Health on Health Status, Adjusted for Controls, with Age Group and Perceived Efficacy as Covariates

	Age Group and Perceived Efficacy											
	35-49				50-64				65+			
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
sick 1	-.3	-.08	-.5	-.15	-.2	-.05	-.0	-.00	-.4	-.09	-.5	-.10	-1.2	-.15	-.1	-.01	-.2	-.03
sick 2	-.4	-.12	-.9	-.24	-.9	-.25	-.7	-.25	-.7	-.24	-.7	-.17	-.7	-.21	-.3	-.09	-1.1	-.31
sick 3	-1.2	-.39	-1.2	-.26	-1.1	-.22	-.8	-.33	-.7	-.18	-1.8	-.25	-.9	-.36	-1.2	-.41	-1.0	-.29
lt 1	-.5	-.21	-.5	-.19	-.5	-.21	-.7	-.34	-.8	-.39	-.7	-.27	-.5	-.26	-.7	-.30	-.6	-.23
lt 2	-.2	-.03	-.8	-.09	-1.5	-.18	-.7	-.20	-.6	-.11	-1.4	-.34	-.7	-.25	-1.8	-.31	-.5	-.12
a	3.0		3.5		3.6		3.0		3.5		3.7		3.3		4.2		3.4	
R^2 (adj)		.27		.21		.28		.33		.29		.25		.36		.34		.31
1979:												
acute 1	-.3	-.14	-.2	-.09	-.1	-.05	.1	.05	-.1	-.05	-.2	-.13	.1	.06	.1	.07	-.4	-.18
acute 2	-.9	-.36	-.8	-.31	-.1	-.03	-.2	-.08	-.2	-.08	-.5	-.16	-.5	-.19	-.6	-.28	-.9	-.32
acute 3	-1.3	-.35	-.8	-.19	-.5	-.13	-.5	-.19	-.6	-.21	-1.1	-.30	-.7	-.22	-.6	-.22	-.9	-.16
acute 4	-1.0	-.22	-.5	-.10	-1.8	-.14	-.8	-.27	-.9	-.20	-.5	-.07	-.8	-.29	-.2	-.03	-1.5	-.31
lt 1	-.2	-.07	-.6	-.12	-.5	-.13	-1.1	-.26	-.3	-.14	-.4	-.15	-.4	-.11	-.4	-.16	-.5	-.17
lt 2	-.7	-.16	-.3	-.06	-1.1	-.33	-.4	-.11	-.6	-.20	-.7	-.18	-.3	-.09	-.2	-.06	-.0	-.01
lt 3	-1.0	-.26	-1.5	-.26	-1.3	-.27	-1.1	-.48	-1.0	-.35	-.7	-.16	-.9	-.40	-.6	-.27	-.9	-.25
a	3.6		4.4		3.6		3.0		3.3		3.7		2.8		3.1		3.1	
R^2 (adj)		.37		.16		.29		.50		.27		.18		.36		.22		.25

(continued)

Table 47(a) - continued

	Age Group and Perceived Efficacy											
	35-49			50-64			65+					
	W	S	B	W	S	B	W	S	B			
	b beta	b beta	b beta	b beta	b beta	b beta	b beta	b beta	b beta			
1981:												
acute 1	-.3 -.13	-.4 -.25	-.1 -.05	-.7 -.32	-.4 -.18	-.1 -.04	-.4 -.20	-.7 -.31	-.6 -.32			
acute 2	-.5 -.24	-.5 -.23	-.3 -.12	-1.1 -.38	-.6 -.20	-.5 -.19	-.8 -.37	-.3 -.12	-1.2 -.43			
acute 3	-1.1 -.36	-.8 -.22	-.2 -.05	-1.1 -.30	-1.1 -.31	-.3 -.10	-1.3 -.54	-1.8 -.63	-1.2 -.26			
acute 4	-.7 -.16	-1.4 -.25	-1.4 -.22	-1.2 -.30	-1.0 -.19	-.5 -.10	-1.5 -.54	-1.6 -.35	-1.1 -.35			
lt 1	-.4 -.14	-.5 -.19	-.1 -.03	-.6 -.14	-1.0 -.30	-.8 -.32	.1 .04	-.1 -.04	-.6 -.27			
lt 2	-.8 -.24	-.4 -.12	-.5 -.10	-.9 -.25	-1.2 -.36	-.7 -.19	.1 .03	-.4 -.10	-.8 -.23			
lt 3	-1.7 -.50	-.8 -.14	-1.6 -.33	-1.6 -.51	-1.4 -.37	-.9 -.27	-.8 -.32	-.5 -.17	-.8 -.27			
a	3.8	3.6	3.8	3.9	4.3	3.5	3.4	4.2	4.0			
R^2 (adj)	.50	.20	.20	.44	.45	.23	.45	.34	.31			

W = worse; S = similar; B = better

Table 47(b)

Regression of Perceived Health on Health Status,
Age Group, Perceived Personal Efficacy, Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	-.44	-.10	-.09	-.04	-.00	-.00
sick2	-.32	-.09	-.12	-.04	-.24	-.09
sick3	-1.16	-.30***	-.52	-.14*	.04	.01
sick4	...	...	-1.80	-.39**	-1.33	-.30***
lt1	-.56	-.24***	-.50	-.14**	-.12	-.04
lt2	-.28	-.06	-1.10	-.29***	-.61	-.17**
lt3	...	...	-1.28	-.38***	-1.64	-.46***
age 65+	-.23	-.09	-.44	-.16	.12	.04
age 50-64	-.33	-.15**	-.06	-.03	-.17	-.08
hi efficacy	.31	.15***	.22	.10	.34	.16
avg efficacy	.24	.10*	.15	.07	.31	.13
age50-64 * lt1 * hi efficacy	.	.	-1.00	-.08**	.	.
age65+ * sick2 * hi efficacy	.	.	1.23	.12**	.	.
hi efficacy * sick2	.	.	-.85	-.20***	.	.
age50-64 * sick2 * hi efficacy	.	.	1.13	.17**	.	.
age50-64 * sick3 * hi efficacy	.	.	1.38	.19**	.	.
age50-64 * lt1	.	.	.	.	-.65	-.13**
age65+ * lt2 * hi efficacy	.	.	.	.	1.09	.14**
hi efficacy * sick3	.	.	.	.	-1.21	-.26***
a	3.35		3.70		3.69	
R^2(adj.)		.36		.40		.42
F	18.16		16.19		17.78	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions (p<.01) are reported.

Table 49(a)

Regression of Perceived Overall Well-Being on Health Status and Income by Age Group

	35-49		50-64		65+	
	b	beta	b	beta	b	beta
1977:						
lo inc	-2.72	-.13**	-3.72	-.15**	2.80	.13
avg inc	.61	.03	-2.50	-.11*	.03	.00
sick1	.53	.01	-2.14	-.04	-4.13	-.06
sick2	-1.23	-.03	-.91	-.03	-.89	-.03
sick3	-2.86	-.07	-7.04	-.18***	-3.50	-.12
lt1	-.75	-.03	-2.14	-.10*	-2.13	-.10
lt2	-2.40	-.03	-2.82	-.07	-3.23	-.09
a	31.37		32.79		31.98	
R^2(adj.)		.02		.08		.03
1979:						
lo inc	-.32	-.06	-.38	-.07	.06	.01
avg inc	-.00	-.00	-.00	-.00	.12	.02
sick1	-.77	-.17***	-.45	-.09	-.76	-.16
sick2	-1.61	-.29***	-1.25	-.18***	-2.06	-.33***
sick3	-1.57	-.17***	-1.74	-.24***	-.02	-.00
sick4	-3.30	-.27***	-2.29	-.23***	-2.87	-.33***
lt1	-.26	-.03	-.18	-.02	.46	.06
lt2	.13	.01	.31	.04	-.10	-.01
lt3	-.09	-.01	-1.45	-.20***	-1.63	-.26***
a	7.78		7.65		8.28	
R^2(adj.)		.09		.16		.22
1981:						
lo inc	-1.06	-.19***	-.58	-.11**	-.24	-.04
avg inc	-.68	-.13***	.21	.04	-.84	-.15*
sick1	-.16	-.03	-.72	-.17**	-.79	-.15
sick2	-.77	-.13**	-1.56	-.28***	-1.56	-.22**
sick3	-.98	-.11**	-1.26	-.17***	-1.14	-.14*
sick4	-1.94	-.15***	-2.30	-.25***	-2.83	-.34***
lt1	-.01	-.00	-.08	-.01	-.59	-.08
lt2	-.76	-.08*	-.23	-.03	-.74	-.10
lt3	-1.40	-.13***	-.71	-.10*	-1.64	-.22***
a	7.99		8.09		9.30	
R^2(adj.)		.10		.11		.16

*p<.05; **p<.01; ***p<.001

Table 49(b)

Regression of Perceived Overall Well-Being on Health Status, Income, Age Group and Interactions

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	.53	.01	-.77	-.16***	-.16	-.17
sick2	-1.23	-.03	-1.61	-.26***	-.77	-.18*
sick3	-2.86	-.08	-1.57	-.19***	-.98	-.18*
sick4	...	...	-3.30	-.32***	-1.94	-.22**
lt1	-.75	-.03	-.26	-.03	-.01	-.21**
lt2	-2.40	-.05	.13	.01	-.76	-.13
lt3	...	...	-.09	-.01	-1.40	-.49***
lo inc	-2.72	-.12**	-.32	-.06	-1.06	-.20***
avg inc	.61	.03	-.00	-.00	-.68	-.13***
age 65+	.61	.02	.50	.08	1.31	-.16
age 50-64	1.42	.07	-.13	-.03	.10	.07
age65+ * lt3	.	.	-1.54	-.12**	.	.
age50-64 * lt3	.	.	-1.36	-.13**	.	.
age65+ * lo inc	5.52	.14**	.	.	.83	.09*
age50-64 * avg inc	.	.	.	.	.90	.12**
a	31.37		7.78		7.99	
R^2(adj.)		.05		.15		.12
F	4.61		10.91		9.19	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions (p<.01) are reported.

Table 50(a)

Regression of Perceived Overall Well-Being on Health Status, Income, and Controls by Age Group

	35-49		50-64		65+	
	b	beta	b	beta	b	beta
1977:						
lo inc	-2.09	-.10*	-2.75	-.11*	2.55	.12
avg inc	.55	.02	-1.92	-.08	-.55	-.02
sick1	.42	.01	-2.38	-.05	-3.16	-.05
sick2	-1.18	-.03	-1.09	-.03	-1.09	-.03
sick3	-3.01	-.07	-6.67	-.17***	-3.52	-.12
lt1	-.88	-.03	-2.12	-.09*	-2.11	-.10
lt2	-1.76	-.02	-2.86	-.07	-3.19	-.09
a	25.73		28.98		28.99	
R^2(adj.)		.04		.09		.04
1979:						
lo inc	-.26	-.05	-.27	-.05	.10	.02
avg inc	-.08	-.02	.09	-.01	.12	.02
sick1	-.77	-.18***	-.45	-.09	-.77	-.16
sick2	-1.62	-.29***	-1.19	-.17***	-2.07	-.33***
sick3	-1.60	-.18***	-1.77	-.24***	.04	-.00
sick4	-3.18	-.26***	-2.25	-.23***	-2.76	-.31***
lt1	-.26	-.03	-.23	-.03	.51	.07
lt2	.14	.02	.33	.04	-.08	-.01
lt3	-.04	-.00	-1.35	-.19***	-1.62	-.26***
a	6.75		6.67		8.01	
R^2(adj.)		.11		.17		.11
1981:						
lo inc	-.90	-.16***	-.51	-.10*	-.37	-.07
avg inc	-.63	-.12**	.29	.06	-.90	-.16*
sick1	-.19	-.04	-.76	-.18**	-.99	-.18*
sick2	-.75	-.13**	-1.57	-.29***	-1.83	-.26**
sick3	-.91	-.11*	-1.24	-.17***	-1.43	-.18*
sick4	-1.78	-.14***	-2.28	-.25***	-3.02	-.36***
lt1	-.04	-.00	-.05	-.01	-.61	-.08
lt2	-.71	-.08*	-.34	-.05	-.74	-.10
lt3	-1.40	-.13***	-.68	-.10*	-1.56	-.21***
a	6.54		7.26		8.68	
R^2(adj.)		.12		.12		.19

*p<.05; **p<.01; ***p<.001

Table 50(b)

Regression of Perceived Overall Well-Being on Health Status, Income, Age Group, Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	.44	.01	-.77	-.16***	-.17	-.04
sick2	-1.03	-.03	-1.60	-.26***	-.75	-.12**
sick3	-2.67	-.07	-1.59	-.20***	-.94	-.12**
sick4	...	...	-3.20	-.31***	-1.84	-.18***
lt1	-.87	-.04	-.26	-.03	-.03	-.00
lt2	-1.98	-.04	.14	.02	-.74	-.09*
lt3	...	...	-.04	-.00	-1.41	-.17***
lo inc	-2.28	-.10**	-.24	-.05	-.97	-.18***
avg inc	.49	.02	.04	.00	-.68	-.13***
age 65+	1.96	.07	.78	.13	1.57	.26**
age 50-64	1.53	.07	-.12	-.02	.21	.04
female	.68	.03	.06	.01	.12	.03
married	3.40	.13***	.63	.10***	.68	.11***
education	.48	.06*	.05	.04	.09	.07**
age65+ * lt3	.	.	-1.56	.12**	.	.
age50-64 * lt3	.	.	-1.32	.12**	.	.43*
age65+ * lo inc	4.87	.13**	.	.	.81	.09*
age50-64 * avg inc	.	.	.	.	.97	.13***
a	26.63		6.92		6.84	
R^2(adj.)		.06		.16		.14
F	5.49		10.72		9.49	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions (p<.01) are reported.

Table 51(a)
Regression of Perceived Well-Being on Income and Health Status, Adjusted for Controls, with Age Group and Perceived Deprivation as Covariates

	Age Group and Perceived Deprivation											
	35-49						50-64					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
lo inc	5.1	.26	-1.6	-.08	-1.7	-.08	-2.8	-.15	-4.8	-.22	2.6	.10
av inc	2.7	.11	0.5	.02	1.1	.06	-2.5	-.12	-0.8	-.03	-1.7	-.08
sick 1	1.5	.05	-1.2	-.03	1.3	.04	-6.1	-.15	0.7	.01	-1.9	-.04
sick 2	0.8	.03	1.0	.03	-3.1	-.09	-4.3	-.16	-.2	-.00	-1.3	-.04
sick 3	2.4	.07	-6.9	-.18	-1.2	-.03	-6.1	-.24	-6.1	-.18	-4.1	-.08
lt 1	-2.7	-.10	0.7	.03	-1.4	-.06	0.9	.05	-4.2	-.21	-1.6	-.07
lt 2	-2.3	-.05	-2.2	-.02	-2.9	-.03	-.9	-.03	4.6	.12	-6.5	-.14
a	21.7		24.7		29.9		24.4		27.7		31.9	
R^2 (adj)		-.03		.05		.02		.01		.16		.05
1979:												
lo inc	-.0	-.01	0.3	.06	-.5	-.10	-1.0	-.23	.5	.09	-.4	-.09
av inc	.0	.01	0.1	.03	.0	.01	.1	.02	.1	.03	.5	.10
acute 1	-.5	-.09	-0.6	-.16	-.8	-.23	1.3	.27	-.7	-.15	-.7	-.18
acute 2	-1.8	-.33	-0.9	-.19	-1.6	-.29	-.1	-.02	-1.8	-.29	-.9	-.15
acute 3	-0.8	-.10	-1.3	-.16	-2.0	-.24	.1	.02	-1.4	-.22	-1.6	-.19
acute 4	-2.6	-.36	-2.7	-.15	-2.9	-.25	-.5	-.10	-2.2	-.24	-.2	-.01
lt 1	-2.1	-.24	0.2	.03	-0.2	-.03	1.6	.18	-.9	-.13	.2	.03
lt 2	0.0	.00	0.3	.04	0.6	.07	.7	.12	.1	.01	.3	.04
lt 3	-.1	-.01	-.6	-.05	0.3	.04	-.2	.04	-.6	-.09	-2.4	-.24
a	5.6		7.1		8.6		3.9		7.0		8.3	
R^2 (adj)		.12		.02		.08		.06		.09		.08

	Age Group and Perceived Deprivation					
	65+					
	W		S		B	
	b	beta	b	beta	b	beta
1977:						
lo inc	-5.2	-.27	3.7	.19	2.9	.15
av inc	-2.8	-.14	2.0	.10	-.5	-.03
sick 1	-12.3	-.24	7.4	.13	-5.7	-.09
sick 2	8.8	.20	6.0	.23	-5.2	-.18
sick 3	-5.0	-.26	2.5	.08	-3.5	-.11
lt 1	0.1	.00	-4.3	-.21	-1.3	-.07
lt 2	-3.3	-.14	-3.6	-.12	-3.9	-.10
a	28.8		23.1		34.0	
R^2 (adj)		-.13		.05		.04
1979:						
lo inc	-.4	-.08	-.0	-.00	.5	.11
av inc	-2.0	-.34	.2	.05	.2	.03
acute 1	-.2	-.03	-1.6	-.38	-.3	-.06
acute 2	-1.0	-.17	-2.3	-.46	-1.8	-.27
acute 3	-.9	-.11	-.9	-.12	1.9	.23
acute 4	-.5	-.09	-2.2	-.14	-2.9	-.34
lt 1	.9	.08	-.1	-.01	1.0	.13
lt 2	1.8	.26	-.3	-.06	.0	.00
lt 3	-1.6	-.31	-1.5	-.26	-1.1	-.18
a	7.1		8.1		7.9	
R^2 (adj)		.11		.11		.24

(continued)

Table 51(a) - continued

	Age Group and Perceived Deprivation											
	35-49			50-64			65+					
	W	S	B	W	S	B	W	S	B			
	b beta	b beta	b beta	b beta	b beta	b beta	b beta	b beta	b beta			
1981:												
lo inc	-1.0 -.21	-.4 -.09	-.4 -.08	-1.1 -.21	-.1 -.02	-.8 -.17	-1.0 -.16	-.2 -.05	.0 .00			
av inc	-.2 -.04	-.4 -.10	-.5 -.12	.3 .07	.1 .02	.5 .11	-1.2 -.20	-.7 -.14	-.5 -.10			
acute 1	.7 .15	.5 .13	-.7 -.18	3.7 .75	-.8 -.21	-.7 -.18	.0 .00	-.8 -.16	-1.3 -.26			
acute 2	.5 .10	.2 .04	-1.3 -.25	2.6 .43	-1.5 -.35	-1.4 -.25	-2.2 -.24	-1.9 -.31	-1.4 -.23			
acute 3	.2 .03	.0 .00	-1.8 -.25	4.1 .71	-1.5 -.18	-1.2 -.18	-1.8 -.25	-.5 -.07	-1.1 -.13			
acute 4	-.1 -.01	-.7 -.06	-2.1 -.15	2.2 .39	-1.6 -.19	-.7 -.05	-3.1 -.36	-2.1 -.28	-3.2 -.40			
lt 1	-.1 -.01	-.3 -.05	.1 .02	-.1 -.02	.3 .05	.1 .01	-1.0 -.12	-.3 -.04	-1.1 -.19			
lt 2	-.3 -.04	-1.0 -.12	-.4 -.05	-1.9 -.25	-.7 -.13	.4 .05	-.8 -.11	-.2 -.03	-1.1 -.14			
lt 3	-.5 -.08	-1.2 -.12	-.3 -.02	-.9 -.18	-.3 -.06	-.3 -.03	-1.6 -.23	-1.7 -.26	-.6 -.08			
a	3.5	6.4	8.2	4.2	7.2	7.8	7.9	7.7	9.4			
R^2 (adj)	-.05	.05	.09	.12	.06	.08	.12	.12	.15			

W = worse; S = similar; B = better

Table 51(b)

Regression of Perceived Overall Well-Being on Health Status, Income, Age Group, Perceived Deprivation, Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	1.84	.04	.11	.02	.92	.19
sick2	-.02	-.00	-1.23	-.20	-.33	-.06
sick3	1.87	.05	-.26	-.03	-.66	-.08
sick4	...	...	-1.83	-.18*	-.97	-.10
lt1	-2.24	-.10	-1.38	-.18	-.93	-.13
lt2	-2.02	-.04	-.11	-.01	-1.57	-.20
lt3	...	...	-.23	-.03	-.87	-.11
lo inc	4.40	.20	-.01	-.00	-.46	-.08
avg inc	1.48	.07	.60	.12	-.29	-.06
age 65+	3.91	.15	2.42	.40*	4.40	.74***
age 50-64	5.44	.26	.37	.08	1.29	.26
lo reldep	11.04	.55***	3.02	.63***	4.06	.85***
avg reldep	7.49	.35**	1.45	.31	2.11	.43*
age50-64 * lo inc * lo reldep	10.13	.17**	.	.	.	.
age50-64 * lt1 * avg reldep	.	.	-3.23	-.19**	.	
a	19.08		5.16		4.05	
R^2(adj.)		.14		.24		.23
F	4.76		6.46		6.53	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions are reported.

Table 52(a)
Regression of Perceived Well-Being on Income and Health Status, Adjusted for Controls, with Age Group and Perceived Justice as Covariates

	Age Group and Perceived Justice											
	35-49				50-64				65+			
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
lo inc	-0.3	-.01	-0.1	-.01	-0.3	-.02	-6.2	-.34	-1.5	-.07	0.1	.00	5.4	.27	-3.0	-.17	5.2	.25
av inc	4.4	.19	2.1	.10	0.1	.01	-6.1	-.29	-4.4	-.21	0.5	.02	4.1	.19	-3.0	-.16	-0.4	-.02
sick 1	-0.3	-.01	-1.2	-.03	0.6	.02	-3.5	-.11	-0.1	.00	0.8	.01	-10.3	-.19	10.6	.19	-4.5	-.06
sick 2	-2.9	-.09	-2.6	-.08	3.5	.10	-4.6	-.14	0.2	.01	-0.4	-.01	4.8	.11	1.9	.09	-3.3	-.10
sick 3	4.2	.12	-5.8	-.14	-4.9	-.11	-6.2	-.29	-5.8	-.14	-4.9	-.10	-8.9	-.41	-0.8	-.03	2.2	.07
lt 1	.6	.02	-1.2	-.04	-1.5	-.07	-2.9	-.16	1.4	.07	-2.9	-.13	1.0	.05	1.5	.08	-3.9	-.18
lt 2	-16.0	-.15	5.1	.08	-4.0	-.04	-0.1	-.00	-2.5	-.06	-5.4	-.11	-1.0	-.04	2.4	.06	-4.7	-.14
a	21.2		22.5		28.3		29.4		28.6		29.6		24.8		27.5		29.0	
R^2 (adj)		.03		.05		.03		.21		.05		.04		.05		-.09		.09
1979:																		
lo inc	0.7	.12	-0.1	-.02	-0.4	-.09	-1.1	-.21	-0.9	-.19	0.7	.15	-0.3	-.05	-0.3	-.09	0.5	.11
av inc	0.3	.06	0.3	.09	-0.2	-.06	0.6	.11	-0.2	-.04	0.3	.06	1.0	.16	-0.0	-.00	-0.1	-.01
acute 1	-0.1	-.03	-0.7	-.17	-1.0	-.26	0.7	.12	-1.3	-.31	-0.1	-.03	0.7	.11	-0.6	-.15	-1.5	-.31
acute 2	-1.7	-.27	-1.4	-.28	-1.5	-.29	0.1	.01	-1.8	-.28	-0.7	-.13	-0.5	-.07	-1.6	-.31	-3.1	-.49
acute 3	-2.0	-.25	-0.6	-.06	-1.6	-.22	-0.6	-.10	-2.0	-.34	-0.9	-.11	0.9	.09	-1.3	-.17	-0.3	-.03
acute 4	-2.3	-.31	-2.1	-.18	-0.2	-.01	-1.5	-.23	-2.3	-.25	-1.8	-.12	-0.1	-.01	-3.5	-.53	-3.0	-.26
lt 1	-1.7	-.20	0.3	.04	-0.1	-.02	-1.0	-.10	0.5	.07	-0.7	-.13	-1.8	-.16	-0.2	-.03	1.2	.17
lt 2	-1.0	-.09	-0.4	-.05	0.6	.07	0.8	.10	-0.4	-.05	0.1	.02	-1.2	-.17	0.4	.07	0.2	.03
lt 3	-0.4	-.06	-0.4	-.04	0.4	.04	-0.5	-.09	0.0	.01	-2.0	-.24	-3.7	-.53	-0.5	-.10	-1.7	-.26
a	6.6		5.9		8.3		3.8		7.7		7.1		8.1		7.6		8.7	
R^2 (adj)		.18		.10		.05		.19		.09		.09		.17		.19		.22

(continued)

Table 52(a) - continued

	Age Group and Perceived Justice											
	35-49						50-64					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1981:												
lo inc	-1.7	-.31	-0.4	-.09	-0.2	-.03	-1.8	-.39	0.0	.00	-0.2	-.04
av inc	-1.9	-.35	-0.2	-.05	-0.5	-.13	-0.9	-.20	0.3	.08	0.6	.13
acute 1	-1.2	-.22	0.5	.12	-0.5	-.14	1.0	.22	-0.3	-.08	-0.8	-.21
acute 2	-2.1	-.33	0.1	.02	-1.0	-.18	-0.3	-.06	-0.7	-.17	-1.6	-.29
acute 3	-1.1	-.12	-1.1	-.14	-0.6	-.08	1.2	.21	-1.2	-.22	-0.4	-.05
acute 4	-1.8	-.16	-1.9	-.15	-2.5	-.23	0.4	.06	-1.3	-.20	-1.7	-.10
lt 1	0.7	.07	-0.3	-.04	0.4	.06	-1.5	-.26	-0.1	-.02	0.6	.11
lt 2	-0.9	-.11	-0.7	-.09	0.3	.03	-3.0	-.40	-0.3	-.07	0.3	.05
lt 3	-0.2	-.03	0.4	.04	-3.1	-.27	-1.5	-.29	-0.1	-.03	-0.7	-.10
a	6.6		4.9		8.3		6.7		6.4		7.9	
R^2 (adj)		.12		.13		.12		.24		.04		.07

	Age Group and Perceived Justice					
	65+					
	W		S		B	
	b	beta	b	beta	b	beta
1981:						
lo inc	-0.7	-.10	0.5	.11	-0.7	-.13
av inc	-0.2	-.03	0.0	.00	-0.9	-.18
acute 1	-0.6	-.09	-0.3	-.07	-1.3	-.26
acute 2	-1.5	-.18	-0.8	-.15	-2.3	-.36
acute 3	-0.5	-.06	-0.7	-.13	-2.0	-.23
acute 4	-2.4	-.29	0.0	.01	-4.3	-.51
lt 1	-0.7	-.07	-0.2	-.03	-0.6	-.10
lt 2	-1.3	-.16	-0.6	-.11	-0.4	-.06
lt 3	-3.9	-.57	-1.5	-.23	-0.2	-.02
a	5.8		8.1		9.6	
R^2 (adj)		.36		-.04		.21

W = worse; S = similar; B = better

Table 52(b)

Regression of Perceived Overall Well-Being on Health Status, Income, Age Group, Perceived Justice, Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	.31	.01	-.24	-.05	-.98	-.21
sick2	-2.25	-.06	-1.43	-.23*	-1.99	-.33***
sick3	6.88	.18*	-2.24	-.28**	-.89	-.11
sick4	...	...	-2.52	-.24***	-1.47	-.15
lt1	.85	.04	-1.60	-.21*	.09	.01
lt2	-17.30	-.36*	-.87	-.11	-.94	-.12
lt3	...	...	-.07	-.01	-.45	-.06
lo inc	-.16	-.01	.76	.15	-1.62	-.30***
avg inc	4.04	.18	.29	.06	-1.57	-.31***
age 65+	3.32	.13	1.07	.18	.63	.11
age 50-64	7.56	.36**	.26	.05	-.96	-.19
hi justice	10.26	.51***	2.38	.51***	1.21	.25*
avg justice	5.80	.26**	1.38	.27*	-.68	-.13
age50-64 * sick3	-13.34	-.21***	.	.	.	.
age65+ * sick3	-17.27	-.28***	.	.	.	.
age65+ * sick3 * avg just	23.41	.16***	.	.	.	.
avg just * sick2	.	.	.	.	2.03	.23**
age65+ * sick3 * hi just	23.49	.26***	.	.	.	.
avg just * sick3	-13.39	-.18***	.	.	.	.
hi just * sick3	-10.84	-.19**	.	.	.	.
age50-64 * lo inc * hi just	.	.	2.74	.23***	.	.
age65+ * lt3	.	.	.	.	-3.00	-.22**
hi just * lt3	.	.	.	.	-2.63	-.21**
age50-64 * lt3 * hi just	.	.	.	.	3.46	.17**
lo inc * hi just	.	.	.	.	1.48	.19**
age65+ * lt3 * hi just	.	.	.	.	5.85	.31***
a	19.58		5.41		6.64	
R^2(adj.)		.16		.25		.26
F	5.34		6.83		7.58	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions (p<.01) are reported.

Table 53(a)
Regression of Perceived Well-Being on Income and Health Status, Adjusted for Controls, with Age Group and Perceived Attainment (Aspirations) as Covariates

	Age Group and Perceived Attainment											
	35-49			50-64			65+					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
lo inc	-1.8	-.10	-1.3	-.06	1.5	.08	-4.6	-.25	-2.2	-.09	1.0	.04	2.0	.10	0.1	.01	5.4	.26
av inc	1.2	.06	1.3	.07	-0.7	-.03	-3.5	-.19	-0.8	-.04	-1.3	-.05	-1.4	-.07	-5.0	-.23	3.0	.15
sick 1	2.6	.07	0.8	.03	-2.0	-.05	-4.2	-.14	0.9	.02	4.2	.05	-9.9	-.18	-0.2	-.00	-0.7	-.01
sick 2	-2.6	-.08	-0.3	-.01	-1.1	-.03	-4.6	-.16	0.5	.02	1.4	.04	0.2	.01	0.0	.00	-4.0	-.12
sick 3	-0.9	-.03	-3.0	-.08	-3.7	-.06	-3.6	-.16	-3.3	-.08	-10.8	-.19	-6.4	-.29	-10.7	-.28	0.9	.03
lt 1	-0.4	-.02	0.5	.02	-0.8	-.03	-2.2	-.12	-0.5	-.03	-1.9	-.08	3.8	.19	-1.0	-.05	-2.4	-.11
lt 2	5.3	.06	-3.8	-.04	-8.6	-.11	0.5	.01	-3.7	-.11	-6.6	-.11	0.1	.00	0.5	.01	-5.4	-.18
a	22.1		26.9		32.2		28.7		25.5		33.9		22.0		31.5		29.2	
R^2 (adj)		.01		.03		-.01		.11		.11		.03		-.03		.05		.02
1979:																		
lo inc	0.7	.12	-0.4	-.08	-1.0	-.21	-1.7	-.33	-0.6	-.11	0.5	.09	-0.3	-.06	0.2	.06	0.4	.07
av inc	-0.1	-.01	0.3	.01	-0.4	-.10	-0.2	-.04	0.2	.03	0.0	.00	-2.9	-.44	0.5	.11	0.3	.05
acute 1	-0.9	-.17	-0.5	-.14	-1.7	-.41	-0.1	-.03	-0.1	-.03	-0.9	-.21	1.9	.35	-1.6	-.41	-0.6	-.13
acute 2	-1.9	-.32	-1.3	-.26	-2.2	-.39	-1.2	-.17	-1.3	-.19	-1.1	-.19	1.1	.18	-2.0	-.46	-2.1	-.28
acute 3	-1.7	-.17	-0.8	-.09	-3.3	-.45	-1.0	-.18	-1.0	-.15	-1.8	-.21	-0.0	-.00	-1.2	-.14	0.3	.03
acute 4	-3.3	-.34	-2.0	-.17	-	-	-1.7	-.25	-1.5	-.12	-3.2	-.32	0.8	.10	-3.1	-.36	-2.9	-.33
lt 1	-1.2	-.12	-0.2	-.03	0.2	.02	1.3	.16	-0.4	-.06	-0.4	-.06	-1.3	-.15	0.9	.15	0.5	.06
lt 2	-0.4	-.04	0.0	.00	1.4	.15	1.1	.16	0.8	.10	-1.2	-.13	-0.6	-.08	0.1	.01	-0.1	-.01
lt 3	-0.6	-.06	0.2	.03	-0.2	-.03	-0.6	-.12	-0.8	-.10	-1.3	-.19	-3.3	-.54	-1.1	-.20	-1.6	-.28
a	6.9		6.4		9.4		6.9		6.4		7.1		6.3		7.5		8.1	
R^2 (adj)		.18		.08		.18		.20		.10		.17		.33		.14		.24

(continued)

Table 53(a) - continued

	Age Group and Perceived Attainment											
	35-49						50-64					
	W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1981:												
lo inc	-1.3	-.23	-0.3	-.07	-1.2	-.22	-0.2	-.04	-0.3	-.06	-0.8	-.15
av inc	-1.1	-.20	-0.4	-.09	-0.2	-.05	1.3	.26	0.3	.08	0.0	.01
acute 1	-1.0	-.19	0.1	.04	-0.9	-.22	1.6	.36	-0.7	-.20	-0.6	-.15
acute 2	-0.9	-.15	-0.2	-.05	-1.7	-.28	0.5	.08	-1.0	-.23	-2.4	-.40
acute 3	-0.6	-.07	-0.9	-.13	0.7	.07	1.1	.19	-1.2	-.18	-0.8	-.10
acute 4	-1.5	-.13	-1.1	-.11	-6.3	-.21	-0.9	-.13	-1.7	-.19	-1.7	-.18
lt 1	0.4	.04	-0.2	-.03	0.2	.02	-2.1	-.33	0.3	.05	0.0	.00
lt 2	-0.6	-.07	-0.7	-.10	-0.4	-.05	-2.2	-.33	-0.2	-.03	0.6	.07
lt 3	-0.7	-.08	-0.6	-.06	-7.1	-.30	-0.9	-.17	-0.4	-.05	-1.2	-.19
a	5.5		6.5		8.5		5.2		6.9		8.0	
R^2 (adj)		.05		.11		.18		.19		.06		.18

	65+					
	W		S		B	
	b	beta	b	beta	b	beta
1981:						
lo inc	-0.2	-.03	-0.2	-.05	-0.2	-.04
av inc	-0.0	-.00	-0.6	-.11	-0.9	-.16
acute 1	0.1	.02	-0.7	-.16	-0.9	-.18
acute 2	-1.1	-.12	-2.4	-.40	-0.9	-.14
acute 3	1.0	.14	-1.2	-.17	-1.5	-.19
acute 4	-2.9	-.37	-1.3	-.17	-3.0	-.36
lt 1	0.8	.07	0.2	.02	-1.5	-.23
lt 2	-1.5	-.19	-0.2	-.02	-1.2	-.16
lt 3	-2.9	-.46	-0.6	-.07	-1.7	-.24
a	7.0		7.8		9.0	
R^2 (adj)		.20		.05		.24

W = worse; S = similar; B = better

Table 53(b)

Regression of Perceived Overall Well-Being on Health Status, Income, Age Group, Perceived Attainment (Aspirations), Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	2.50	.06	-.82	-.18	-.94	-.20
sick2	-2.51	-.07	-1.57	-.25**	-.87	-.14
sick3	.62	.02	-1.91	-.24*	-.57	-.07
sick4	...	...	-3.29	-.32***	-1.51	-.15
lt1	-.72	-.03	-1.26	-.16*	.39	.05
lt2	3.84	.08	-.52	-.06	-.63	-.08
lt3	...	...	-.67	-.09	-.64	-.08
lo inc	-1.85	-.08	.74	.14	-1.35	-.25**
avg inc	1.16	.05	.03	.01	-1.12	-.22**
age 65+	1.46	.06	1.08	.18	.86	.14
age 50-64	2.52	.12	.12	.02	-1.09	-.22
hi attain	9.67	.44***	2.23	.44***	2.87	.55***
avg attain	5.84	.29***	.97	.21	.80	.17
age50-64 * lt1	.	.	2.42	.22**	-2.19	-.20*
age65+ * avg inc	.	.	-3.67	-.34**	.	.
age50-64 * lo inc	.	.	-1.72	-.23**	.	.
age50-64 * lt2 * hi attain	.	.	-4.52	-.18**	.	.
age65+ * avg inc * avg attain	.	.	4.13	.21**	.	.
age50-64 * lo inc * hi attain	.	.	3.00	.23***	.	.
lo inc * avg attain	.	.	-1.23	-.18**	.	.
age65+ * lo inc * hi attain	.	.	3.49	.30**	.	.
age65+ * avg inc * hi attain	.	.	4.17	.30**	.	.
age50-64 * avg inc	.	.	.	.	2.48	.32***
age65+ * lt3 * hi attain	.	.	.	.	7.35	.39
hi attain * lt3	.	.	.	.	-6.45	-.48**
a	22.65		5.99		5.85	
R^2(adj.)		.16		.24		.26
F	5.38		6.51		7.49	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions are reported.

Table 54(a)
Regression of Perceived Well-Being on Income and Health Status, Adjusted for Controls, with Age Group and Perceived Attainment (Expectations) as Covariates

	Age Group and Perceived Attainment																	
	35-49						50-64						65+					
	W		S		B		W		S		B		W		S		B	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:																		
lo inc	-2.3	-.12	-2.5	-.13	-0.6	-.03	-7.2	-.37	-1.3	-.06	-1.6	-.06	-5.0	-.28	6.8	.30	1.6	.07
av inc	2.1	.09	0.2	.01	0.6	.03	-7.0	-.32	-1.2	-.06	-1.1	-.05	-19.5	-1.06	9.1	.31	-1.0	-.05
sick 1	-4.6	-.12	1.0	.03	2.2	.06	-1.3	-.03	-2.3	-.05	-1.1	-.02	-	-	0.8	.01	-1.6	-.03
sick 2	-1.1	-.03	0.8	.02	-4.9	-.15	-7.0	-.15	1.0	.04	-1.6	-.04	8.2	.36	-3.3	-.11	-1.7	-.05
sick 3	-6.1	-.19	-2.7	-.07	-0.8	-.02	-5.5	-.24	-3.9	-.10	-6.6	-.15	-3.5	-.18	-9.2	-.28	-1.2	-.04
lt 1	-1.7	-.07	1.1	.04	-1.3	-.05	-4.4	-.22	-1.8	-.09	-2.4	-.10	11.6	.64	4.8	.22	-4.0	-.18
lt 2	18.1	.21	2.5	.02	-12.5	-.17	4.3	.09	-3.3	-.09	-3.2	-.07	0.4	.01	8.3	.18	-7.7	-.24
a	22.6		24.5		30.3		40.1		25.3		29.0		12.2		22.0		32.1	
R^2 (adj)		.05		.04		.07		.23		.03		.08		-.04		.22		.05
1979:																		
lo inc	0.6	.11	-0.5	-.10	-0.5	-.11	-1.5	-.25	-0.6	-.13	-0.0	-.00	-1.9	-.39	-3.8	-.53	0.3	.06
av inc	-0.1	-.02	-0.0	-.00	-0.0	-.00	-0.3	-.05	-0.5	-.11	0.4	.08	-3.0	-.59	-1.7	-.17	0.3	.07
acute 1	-0.8	-.17	-0.7	-.18	-0.9	-.21	-0.3	-.06	-0.5	-.11	-0.5	-.11	-1.1	-.23	0.9	.15	-0.8	-.17
acute 2	-1.3	-.22	-1.1	-.22	-2.0	-.37	-1.1	-.13	-2.8	-.45	-1.0	-.16	0.2	.04	-1.5	-.22	-2.1	-.34
acute 3	-2.1	-.20	-1.3	-.14	-1.8	-.22	-1.7	-.27	-1.3	-.15	-1.3	-.18	-0.3	-.04	-3.3	-.24	0.4	.06
acute 4	-3.0	-.30	-0.1	-.01	-4.6	-.33	-2.6	-.37	-0.1	-.02	-3.0	-.25	-7.2	-.64	-3.8	-.42	-2.0	-.22
lt 1	-0.4	-.04	-1.0	-.11	-0.1	-.01	1.1	.12	0.1	.01	-0.5	-.07	1.0	.09	0.9	.12	0.4	.06
lt 2	-0.3	-.03	-0.5	-.07	1.0	.11	0.2	.02	1.1	.13	-0.1	-.01	-3.0	-.25	-2.2	-.33	-0.2	-.03
lt 3	1.1	.10	-1.3	-.14	0.0	.00	-0.1	-.01	-2.0	-.28	-1.6	-.21	-4.2	-.60	-4.0	-.25	-2.0	-.34
a	5.9		6.7		8.0		6.5		8.7		6.7		9.5		14.3		7.9	
R^2 (adj)		.13		.06		.15		.11		.14		.17		-.24		.03		.23

Table 54(b)

Regression of Perceived Overall Well-Being on Health Status, Age Group, Perceived Attainment (Expectations), Interactions and Controls

	1977		1979	
	b	beta	b	beta
sick1	-2.91	-.07	-.68	-.14
sick2	-.06	-.00	-1.19	-.19*
sick3	-1.89	-.05	-2.21	-.27**
sick4	...	...	-3.20	-.31**
lt1	-1.93	-.08	-.53	-.07
lt2	12.66	.26	-.32	-.04
lt3	...	...	1.00	.13
incl1	-2.41	-.11	.53	.10
incl2	2.66	.12	-.11	-.02
age 65+	2.02	.08	1.18	.20
age 50-64	6.90	.33***	.47	.10
hi attain	7.03	.35***	1.31	.27*
avg attain	4.30	.20*	1.01	.17
hi attain * lt2	-25.94	-.45**	.	.
a	22.54		6.11	
R^2(adj.)		.10		.19
F	3.61		5.07	

*p<.05; **p<.01; ***p<.001
Note: Only significant interactions are reported.

Table 55(a)
Regression of Perceived Well-Being on Income and Health Status, Adjusted for Controls, with Age Group and Perceived Efficacy as Covariates

	Age Group and Perceived Efficacy											
	35-49				50-64				65+			
	Low		Av.		High		Low		Av.		High	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1977:												
lo inc	0.4	.02	0.5	.02	-1.9	-.08	-6.2	-.30	0.8	.03	2.8	.10	1.1	.06	9.3	.44	0.2	.01
av inc	4.8	.22	0.9	.04	-0.6	-.03	-2.7	-.12	0.1	.01	-0.1	-.00	-1.8	-.08	1.9	.09	-0.4	-.02
sick 1	2.3	.06	0.5	.01	-0.4	-.01	-5.4	-.12	-9.0	-.20	6.3	.13	-11.9	-.15	-8.4	-.15	4.7	.07
sick 2	-0.1	-.00	-4.1	-.12	3.7	.09	-0.1	-.00	-2.4	-.08	0.1	.00	-0.8	-.02	0.4	.01	-4.6	-.15
sick 3	-3.5	-.12	6.0	.11	-2.1	-.04	-6.4	-.22	-3.6	-.10	-7.9	-.11	-4.5	-.16	-6.3	-.24	-1.8	-.06
lt 1	5.1	.22	-1.2	-.05	-4.0	-.16	-0.4	-.02	-1.2	-.06	-2.6	-.10	-1.2	-.06	0.7	.03	-2.2	-.10
lt 2	2.0	.03	-5.2	-.06	-4.6	-.05	2.2	.06	-3.0	-.06	-5.1	-.13	-1.2	-.04	-6.1	-.12	-0.8	-.02
a	19.7		27.7		29.2		27.8		23.9		32.7		24.0		28.9		32.9	
R^2 (adj)		.09		.03		.03		.13		.06		.04		.03		.16		-.03
1979:												
lo inc	0.0	.00	-0.2	-.05	-0.4	-.08	0.2	.04	-0.0	-.00	-0.1	-.01	-0.2	-.04	-0.1	-.03	0.6	.15
av inc	0.0	.00	0.3	.07	-0.3	-.08	0.8	.13	0.0	.00	-0.5	-.10	-0.3	-.06	0.2	.03	-0.1	-.02
acute 1	-0.0	-.00	-1.2	-.27	-0.8	-.21	0.5	.09	0.2	.04	-0.9	-.20	-1.7	-.34	0.7	.13	-1.4	-.33
acute 2	-1.5	-.26	-1.4	-.26	-1.2	-.25	-0.3	-.04	-0.1	-.02	-2.0	-.28	-2.8	-.45	-0.8	-.12	-2.3	-.37
acute 3	-2.0	-.23	-0.3	-.03	-1.8	-.25	-1.0	-.15	-0.6	-.10	-2.2	-.27	-2.6	-.35	3.2	.40	-0.4	-.04
acute 4	-2.4	-.23	-2.3	-.21	-7.0	-.29	-0.7	-.10	-1.7	-.18	-0.5	-.02	-3.2	-.48	-1.8	-.14	-2.9	-.31
lt 1	0.1	.01	0.3	.03	-0.5	-.08	-1.8	-.14	-0.1	-.02	-0.6	-.10	0.3	.03	-0.9	-.12	1.7	.29
lt 2	-0.9	-.08	0.2	.02	0.3	.04	-0.3	-.03	0.3	.04	0.5	.06	0.8	.11	-1.2	-.14	0.2	.03
lt 3	-0.4	-.05	-0.0	-.00	1.0	.11	-1.9	-.30	-1.4	-.21	-0.2	-.03	-0.9	-.17	-1.7	-.25	-2.0	-.29
a	5.5		7.2		7.7		4.6		7.1		8.2		8.0		6.9		8.4	
R^2 (adj)		.16		.08		.12		.18		.07		.07		.21		.20		.32

(continued)

Table 55(a) - continued

	Age Group and Perceived Efficacy											
	35-49			50-64			65+					
	Low		Av.		High		Low		Av.		High	
	b	beta	b	beta	b	beta	b	beta	b	beta	b	beta
1981:												
lo inc	-0.9	-.16	-0.2	-.04	-1.2	-.22	-0.6	-.13	-0.6	-.10	-0.3	-.07	0.7	.12	-0.6	-.12	-0.9	-.16
av inc	-0.8	-.15	-0.1	-.03	-0.6	-.13	0.1	.03	0.8	.17	0.1	.03	-0.1	-.01	-1.2	-.25	-0.5	-.09
acute 1	-0.2	-.03	-0.2	-.04	-0.0	-.01	-0.8	-.19	-0.2	-.05	-0.8	-.21	-0.7	-.12	-2.0	-.42	-1.0	-.20
acute 2	-0.9	-.15	0.5	.10	-1.1	-.21	-1.0	-.20	-0.9	-.16	-1.9	-.38	-1.7	-.25	-0.8	-.13	-3.6	-.47
acute 3	-0.7	-.09	0.4	.04	-2.6	-.28	-0.9	-.14	-0.9	-.13	-1.1	-.17	-0.9	-.13	-1.2	-.19	-2.1	-.19
acute 4	-1.4	-.13	-2.5	-.20	-1.4	-.10	-1.6	-.22	-3.1	-.31	-1.4	-.12	-1.9	-.24	-3.2	-.33	-4.4	-.58
lt 1	0.5	.05	-0.1	-.02	-0.1	-.02	-1.5	-.20	0.4	.07	0.4	.08	-0.1	-.01	-2.1	-.32	-0.6	-.11
lt 2	-1.0	-.12	-0.1	-.01	-0.0	-.00	-1.1	-.17	-0.6	-.09	0.7	.09	-1.3	-.19	-2.0	-.23	1.2	.15
lt 3	-1.5	-.16	-0.2	-.01	-0.2	-.02	-1.0	-.16	-1.4	-.18	0.0	.00	-2.8	-.38	-1.1	-.17	-0.4	-.05
a	6.6		5.7		7.8		6.8		7.1		8.2		8.1		10.4		9.3	
R^2 (adj)		.08		.06		.13		.14		.16		.05		.17		.12		.35

Table 55(b)

Regression of Perceived Overall Well-Being on Health Status, Age Group, Perceived Personal Efficacy, Interactions and Controls

	1977		1979		1981	
	b	beta	b	beta	b	beta
sick1	2.24	.05	-.39	-.08	-.43	-.09
sick2	-.46	-.01	-1.89	-.30***	-1.17	-.19**
sick3	-4.20	-.11*	-2.38	-.29***	-1.00	-.13*
sick4	...	...	-3.03	-.29***	-1.80	-.18**
lt1	4.61	.20**	.14	.02	.39	.05
lt2	2.34	.05	-.94	-.11	-1.05	-.13*
lt3	...	...	-.27	-.04	-1.55	-.19***
lo inc	-.23	-.01	-.08	-.02	-.85	-.16**
avg inc	4.25	.19*	-.10	-.02	-.88	-.17**
age 65+	5.67	.22*	1.35	.22	.75	.13
age 50-64	5.36	.25**	-1.18	-.24	.09	.02
hi efficacy	9.09	.44***	.95	.20	.74	.14
avg efficacy	5.57	.25**	.35	.07	-.44	-.08
age50-64 * av inc	-6.67	-.19**	.	.	.	.
age50-64 * lo inc * hi eff.	8.33	.12**	.	.	.	.
age50-64 * hi eff	-5.81	-.20**	.	.	.	.
avg eff * sick3	12.34	.17**	.	.	.	.
hi eff * lt1	-8.46	-.22***	.	.	.	.
age50-64 * lt1	.	.	.	.	-1.96	-.18**
age65+ * lo inc	.	.	.	.	1.51	.17**
age50-64 * lt1 * avg eff.	.	.	.	.	2.51	.12**
age50-64 * lt1 * hi eff.	.	.	.	.	2.57	.16**
a	21.08		6.52		6.91	
R^2(adj.)		.14		.21		.19
F	4.62		5.72		5.39	

*p<.05; **p<.01; ***p<.001 Note: Only significant interactions reported.